Roland

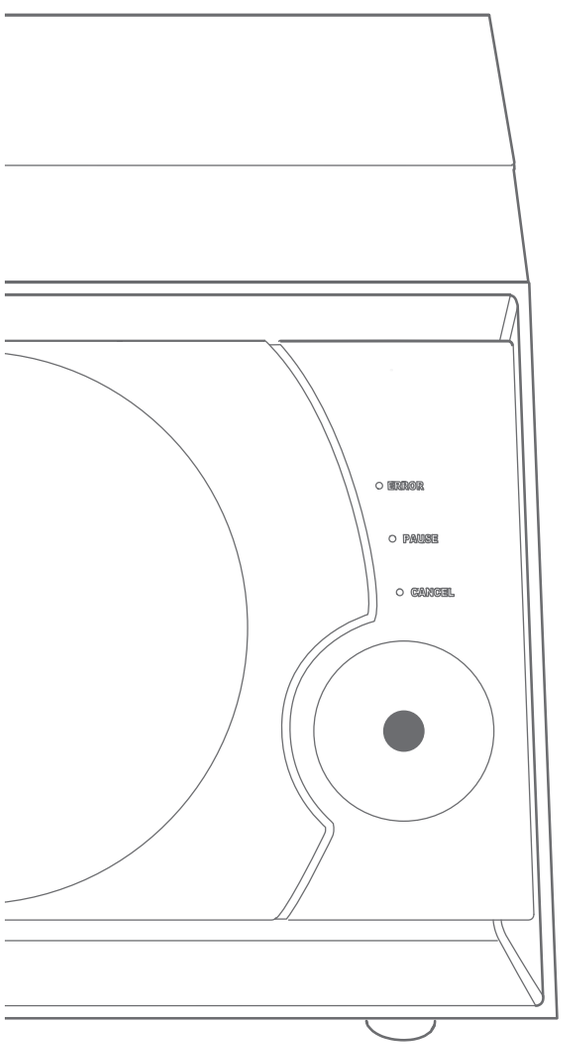
DWX-4
User's Manual

1 Operation Screen

2 Cutting

3 Maintenance

4 FAQ



EASY SHAPE Roland DENTAL SOLUTION

The special website which introduces a DENTAL SOLUTIONS is established.
For the latest information about this machine (including manuals), see the special website Easy Shape (http://www.rolandeasyshape.com).

Roland DG Corporation

Contents

Contents 2

Chapter 1 Operation screen 4

Displaying or Exiting VPanel 5
- What is VPanel? 5
- Displaying VPanel 5
- Display of VPanel in the Tasktray 6
- Exiting VPanel 6

Overview of VPanel Window 7
- Top Window 7

Description of SETTINGS Window 8
- "Settings" Tab 8
- "Override" Tab 9
- "Maintenance" Tab 10
- "Mail " Tab 11
- "Manual correction" Dialog 12
- "Tool management" Dialog 13
- "Tool registration" Dialog 14

Chapter 2 Cutting 15

How to Use / Read the Built-in Panel 16
- How to Use / Read the Built-in Panel 16
- Colors and Statuses of Signal LED Lamp and Operation Button 16

Power On / Off 17
- Turn On the Power Switch 17
- Turn Off the Power Switch 17

Getting Ready to Cutting 18
- Preparation of Workpieces (Usable Workpieces) 18
- Preparation for Tool (Size of Tool That Can Be Used) 18
- Preparation for Supply of Compressed Air (Setting the Regulator) 18

Starting Cutting 19
- STEP1: Attaching the Workpiece 19
- STEP2 : Attaching a Tool 22
- STEP3 : Outputting Cutting Data 23
- Quitting Outputting 24

Chapter 3 Maintenance 25

Precautions about Maintenance 26
- Important Notes on Care and Maintenance 26

Daily Maintenance 27
- Cleaning after Cutting Operation Ends 27

Periodic Maintenance 28
- Spindle Run-in (Warm-up) 28
- Correction of Milling Machine 29
- Care and Storage Methods of Detection Pin 30
- Retightening the Collet 31
- Care and Maintenance of the Regulator 33
- Replacing the Collet 34
- Cleaning the Inside and Applying Grease 35
- Replacing of the Spindle Unit 38

Chapter 4 Read This Chapter Whenever You Face a Problem. (FAQ) 39

What to Do If… 40
- Initialization Is Not Performed or Initialization Fails 40
- The Operation Button Does Not Respond 40
- VPanel Does Not Recognize the Machine 40
- Cutting Data Can Not Be Output to the Machine, or the Machine Does Not Operate Although Cutting Data Is Output to It 41
- The Computer Shut Down When Plural Machines Were Connected 41
- The Ionizer Is Not Effective (Cutting Waste Adhere to the Around Wall of Cutting Area) 41
- Compressed Air Does Not Come Out 42
- Abnormal Noise Occurs 42
- Automatic Correction Fails 42
- Tool Management Information Was Lost 43
- The Cutting Results Are Not Attractive 43
- There Is a Level Difference in the Cutting Result 43
- Chipping Occurs (Edges of Cut Workpieces Become Chipped) 43
- A Hole Opens in Cutting Result 44
- The Dimensions of Cutting Results Do Not Match 44
- To Install Driver Separately 45
- To Install Software and Electronic Manual Separately 48
- Installation Is Impossible 49
- Uninstalling the Driver 50
- Uninstalling the VPanel 51

Responding to an Error Message 52

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Chapter 1
Operation screen

Displaying or Exiting VPanel 5

What is VPanel? 5

Displaying VPanel 5

Display of VPanel in the Tasktray 6

Exiting VPanel 6

Overview of VPanel Window 7

Top Window 7

Description of SETTINGS Window 8

"Settings" Tab 8

"Override" Tab 9

"Maintenance" Tab 10

"Mail " Tab 11

"Manual correction" Dialog 12

"Tool management" Dialog 13

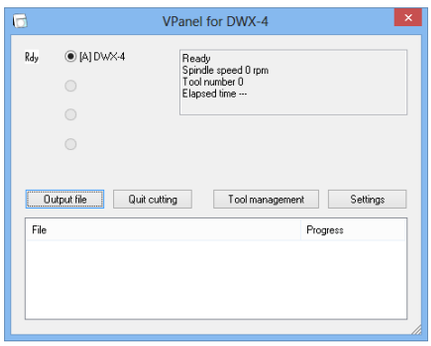
"Tool registration" Dialog 14

Displaying or Exiting VPanel

What is VPanel?

VPanel is an application to operate the milling machine on the computer screen. It has functions to output cutting data, perform maintenance, and make various corrections. In addition, it displays error messages of the milling machine.

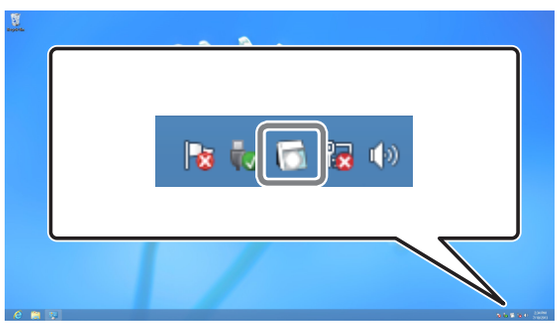
☞ "Setup Guide" ("Installing and Setting Up the Software")



Displaying VPanel

Click (the VPanel icon) in the task tray of desktop screen.

VPanel will be displayed on the screen. If you cannot find in the tasktray, activate it from the [Start] screen (or [Start] menu) of Windows.



How to start VPanel from the [Start] screen (or [Start] menu) of Windows

Windows 8

Right-click the background in the [Start] screen to display the app bar, and click [All Apps].
Click the [VPanel for DWX-4] icon of the [Roland DWX-4].

VPanel will be activated.

Windows XP / Vista / 7

Go to [Start] menu, and click [All Programs] (or [Program]) - [Roland DWX-4] - [VPanel for DWX-4].

VPanel will be activated.

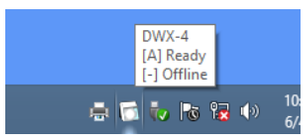
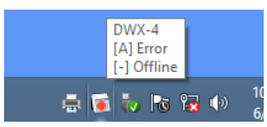
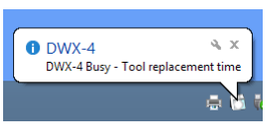
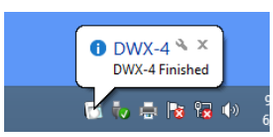
VPanel serves as a resident software

VPanel works as a resident software which is constantly working to manage the milling machine and send e-mails*, and so on. You are recommended to make settings to enable VPanel to start automatically when the computer starts. (☞ P. 8, ""Settings" Tab") When you click on the upper right corner of the window, the window will disappear from the screen, but the program will not be exit. While it is running, is constantly displayed in the tasktray.

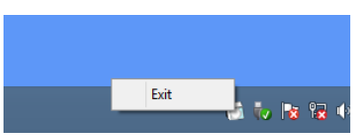
*The e-mail to notify the completion of cutting or an error when it occurs. (☞ P. 11, ""Mail " Tab")

Display of VPanel in the Tasktray

When the VPanel icon is displayed in the tasktray, the connected milling machines are always monitored. The following statuses are displayed in the tasktray.

ON /OFF of the power		Among the connected milling machines, if at least one milling machine is ON, it is displayed in white. If no machine is ON, it is displayed in gray. You can check the machine which is ON by checking the message which appears when you place the mouse pointer on .
Display when an error occurs		Among the connected milling machines, if an error occurs on at least one milling machine, it is displayed in red. You can check the machine on which an error occurs by checking the message which appears when you place the mouse pointer on .
Display when tool replacement is needed		If the tool needs to be replaced, "Tool replacement time " will be displayed.
Display when cutting is completed		The machine of which cutting is completed is displayed.

Exiting VPanel

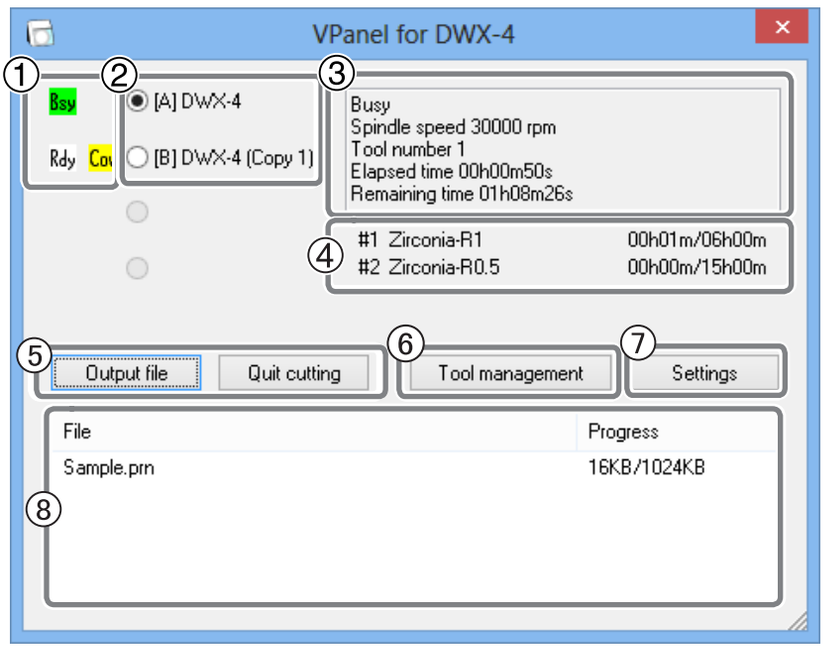


You can exit the program by right-clicking in the tasktray, and click [Exit].

Overview of VPanel Window

Top Window

This is the top window of VPanel. It displays the status of the connected milling machine and output list of cutting data. Output of cutting data can also be executed by this window.

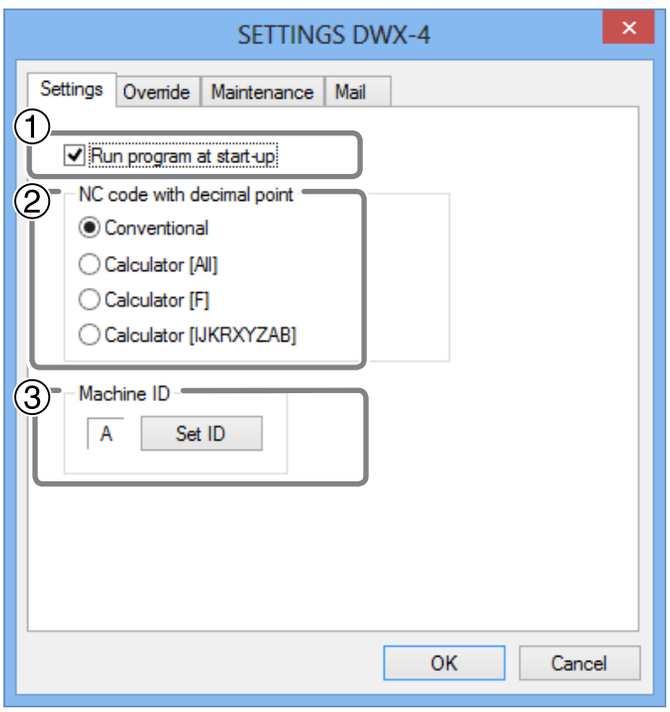


No.	The contents of a display	Details
①	Machine operation status	Rdy : Cutting data can be received. Off : The power of the milling machine is OFF. Ini : The initial operation is underway. Bsy : The machine is in operation. Err : An error has occurred. Pau : The operation is paused. * When the front cover is open, "Cov" is displayed next to the operation status.
②	Name of connected machine	Displays ID and the name of connected machine. The ID of a machine whose power is off is shown by the sign [-].
③	Status of milling machine	The operation state, spindle rotation speed, and cutting time, etc. are displayed. Among the connected machines, the machine whose radio button displayed on the left of the name is checked is displayed.
④	Tool work time	Displays the name of the tool selected in "Tool management," the current work time, and the time when it must be replaced. For example, "00h01m/06h00m" indicates that "00h01m" is the work time and "06h00m" is the replacement time of the tool.
⑤	Output file / Quit cutting	Used to output and cancel cutting data. ☞ P. 23, "STEP3 : Outputting Cutting Data"
⑥	Tool management	Used to select or register a tool you want to control its work time. ☞ P. 13, ""Tool management" Dialog"
⑦	Settings	Displays the SETTINGS window. ☞ P. 8, "Description of SETTINGS Window"
⑧	Output list	Data under cutting and data waiting for cutting are displayed. The progress of cutting is also displayed.

Description of SETTINGS Window

"Settings" Tab

In this tab, you can make the VPanel auto startup setting and settings related to the NC code, etc. When more than one machine is connected, the machine selected in the top window is the target of setting.



① Run VPanel program at start-up

When a check is put in this checkbox, VPanel is automatically started up at the time when Windows starts up, and VPanel is displayed in the tasktray.

➢ Initial setting : Checked

② NC code with decimal point

Select handling and interpretation of the decimal point for NC code. In the case of "Conventional," the unit is interpreted as millimeter (or inch) when there is a decimal point, and as 1/1000 millimeter (or 1/10000 inch) when there is no decimal point. In the case of "Calculator," the unit is always interpreted as millimeter (or inch) regardless of whether or not there is a decimal point. In the case of "Calculator," select the scope of application. Select an appropriate setting according to your CAM or NC code.

➢ Initial setting : Conventional

③ Machine ID

You can set an ID to the machine. You should use this function when connecting more than one machine.

➢ Initial setting : A

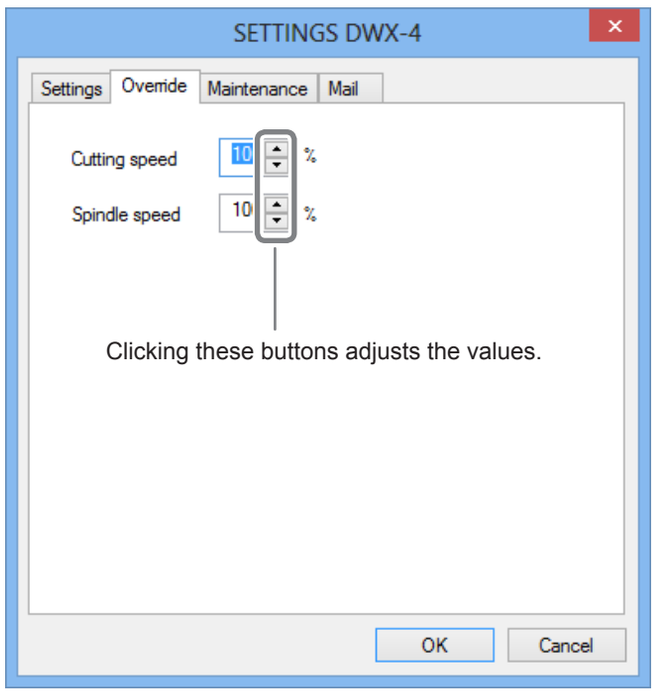
☞ "Setup Guide" ("Connecting Multiple Units")

Notice

Change the ID according to the procedure of the "Setup Guide."

"Override" Tab

In this tab, you can adjust the "Cutting speed" and "Spindle speed" during cutting. This is useful when you want to change the feed rate or speed as you monitor the status of cutting.
An override value is specified as a percentage. For example, when the command in the cutting data sent from the computer is for a speed of 10,000 rpm, specifying an override of 150% produces an actual speed of 15,000 rpm.
When more than one machine is connected, the machine selected in the top window is the target of these operations.



Cutting speed

The moving speed of the tool during the cutting of workpieces can be adjusted. With the speed defined in the cutting data regarded as 100%, the larger the value, the higher the speed, and the smaller the value, the lower the speed.

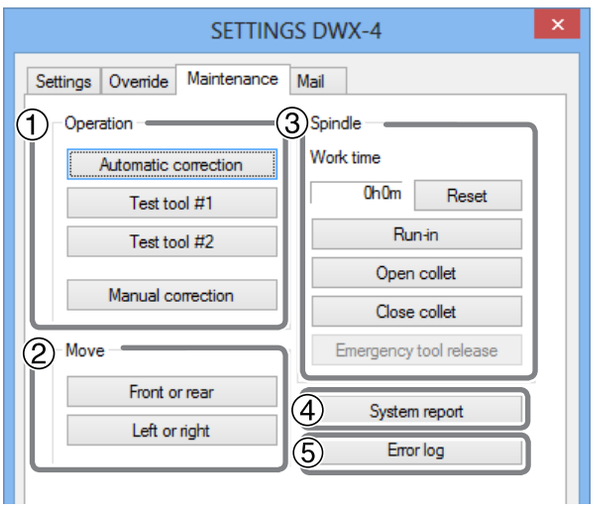
Spindle speed

The spindle speed during cutting can be adjusted. With the speed defined in the cutting data regarded as 100%, the larger the value, the higher the speed, and the smaller the value, the lower the speed.

- When the milling machine is turned OFF, the override is returned to 100%.
- In the top window, not the rotation speed of the spindle after override, but the one specified by the cutting data is displayed.
- Setting an override does not let you perform operation beyond the machine's maximum or minimum speeds.

"Maintenance" Tab

In this tab, you can make the operations related to maintenance, such as automatic correction of the milling machine and system report. When more than one machine is connected, the machine selected in the top window is the target of these operations.



① Operation

Automatic correction	Perform automatic correction of the milling machine after the machine was installed or relocated or when the cutting position is incorrect. ☞ P. 29, "Correction of Milling Machine"
Test tool **	Perform a test to replace the tool. (** refers to #1 to #2.)
Manual correction	Use this function when you want to correct the machine manually. ☞ P. 12, ""Manual correction" Dialog"

② Move (These buttons are used to perform cleaning of the machine.)

Front or rear	The rotary axis unit will move forward or backward by clicking on this button. Whenever the movement is complete, "Operation was completed" is displayed. Click "OK."
Left or right	The spindle unit will move to the right or left by clicking on this button. When the movement is complete, "Operation was completed" is displayed. Click "OK."

* When the operation button of the built-in panel of the machine is pressed, the spindle head and table return to the VIEW position . (The spindle unit returns to the right end in the highest position, and the rotary axis unit returns to the forefront position)

③ Spindle

Work time	The work time of the spindle unit will be displayed. After the replacement of the spindle unit, click on "Reset" to reset the value at 0. ☞ P. 38, "Replacing of the Spindle Unit"
Run-in	You can perform run-in operation for the spindle. When installing and moving the machine, or replacing the spindle unit. ☞ P. 28, "Spindle Run-in (Warm-up)"
Open collet Close collet	You can open or close the collet. Use this function to retighten the collet. ☞ P. 31, "Retightening the Collet"
Emergency tool release	The collet can be opened before initialization. Use this function if initialization cannot be performed when, for example, the tool gets snagged on something. It will become valid by turning on the power with the front cover open.

④ System report

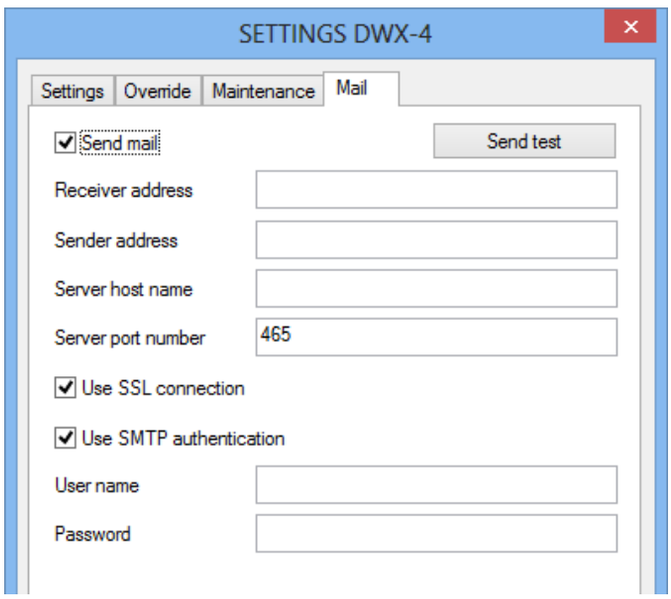
You can display the serial number, firmware version, and total work time, etc. of the machine in a report.
You can save the system report in a text file by clicking "Save" in the System report window.

⑤ Error log

You can display the logs of the errors which have occurred so far. You can save the error log in a text file by clicking "Save" in the error log window.

"Mail " Tab

In this tab, you can make the setting to receive e-mails notifying that cutting is completed or an error has occurred. When more than one machine is connected, the machine selected in the top window is the target of the setting.



When a check is put in [Send mail], you can enter each item. For information on the input values, see the table below.

Receiver address	The e-mail address of an e-mail receiver. You can input more than one address by separating with comma.
Sender address	The e-mail address used in the computer which presently makes the settings of VPanel. (It is an e-mail sender address. It must be an e-mail address from which e-mails can be sent to the e-mail sending server explained below.)
Server host name	The e-mail sending server name (SMTP server name) of the mail software used in the computer which presently makes the settings of VPanel.
Server port number	The e-mail sending server port number of the mail software used in the computer which presently makes the settings of VPanel.
Use SSL connection	Put a check mark, and the security-protected connection (SSL) will be used. Follow the settings of the mail software used. Follow the settings of the mail software used.
Use SMTP authentication **User name / Password**	Put a check mark, and authentication will be used to send e-mails. Input the user name and password for authentication. Follow the settings of the mail software used.

Click [Send test] to perform the sending test. If the e-mail with the following data arrives at the address specified in "Receiver address," the setting is complete.

Subject : <Name of the machine> Text : Test

When an e-mail failed to be sent, the "Windows Script Host" error window is displayed. Check the input items again.

Note

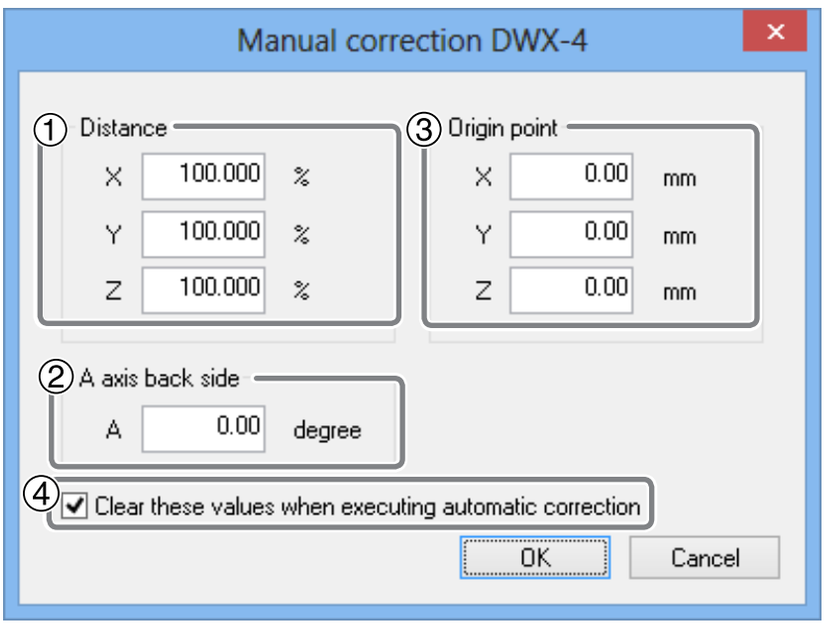
* The sending of e-mails may become impossible due to settings of the security software, etc.
  If e-mails cannot be sent, check the settings of the security software used as anti-virus software.
* Consult with the network administrator about details of e-mail settings.
* VPanel does not support TLS connections (STARTTLS).

"Manual correction" Dialog

In this dialog, you can make corrections of the milling machine manually. Perform corrections if you want to precisely adjust the accuracy. When more than one machine is connected, the machine selected in the top window is the target of corrections.

* Perform automatic correction before performing this correction.

☞ P. 29, "Correction of Milling Machine"



① Distance

You can correct the moving distance in the X, Y, and Z directions respectively. Set the correction value as considering the initial moving distance as 100%.

➢ Initial setting : 100%

② A axis back side

You can correct the angle when the A axis is rotated by 180 degrees. Set the correction value as considering the initial setting as 0.00 degree.

➢ Initial setting : 0.00 degree

③ Origin point

You can correct the origins of the X, Y, and Z axes, respectively. Set the correction value as considering the initial setting as 0.00 mm.

➢ Initial setting : 0.00 mm

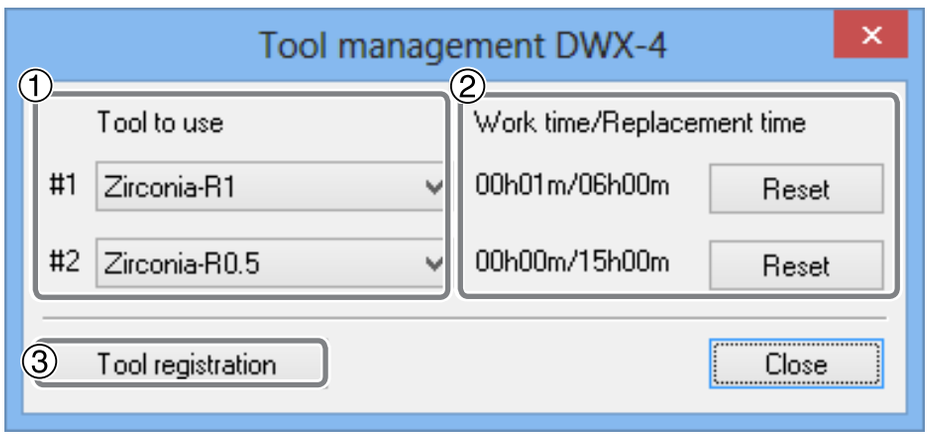
④ Clear these values when executing automatic correction

If you check this checkbox, the settings of ①, ②, and ③ are reset to the default values when the automatic correction is performed.

➢ Initial setting : Checked

"Tool management" Dialog

By selecting a tool to be used in this dialog, the work time of the tool selected will be automatically recorded. In addition, when the tool reached the preset replacement time, a warning message will be displayed. When more than one machine is connected, the tool of the machine selected on the top window will be managed.



① Tool to use

A tool whose work time will be counted can be selected from among the tools registered in ③. (#1 and #2 are tool numbers.) Select a tool according to the tool set in the stocker. The name and work time/replacement time of the tool selected will be displayed on the screen.

When you do not use this function, select No tool (leave the box blank).

② Work time / Replacement time

The work time and replacement time of the tool selected in ① will be displayed. The replacement time of the tool can be changed from "Tool registration" of ③. After a tool was replaced with a new one, click on "Reset" to set the work time at 0.

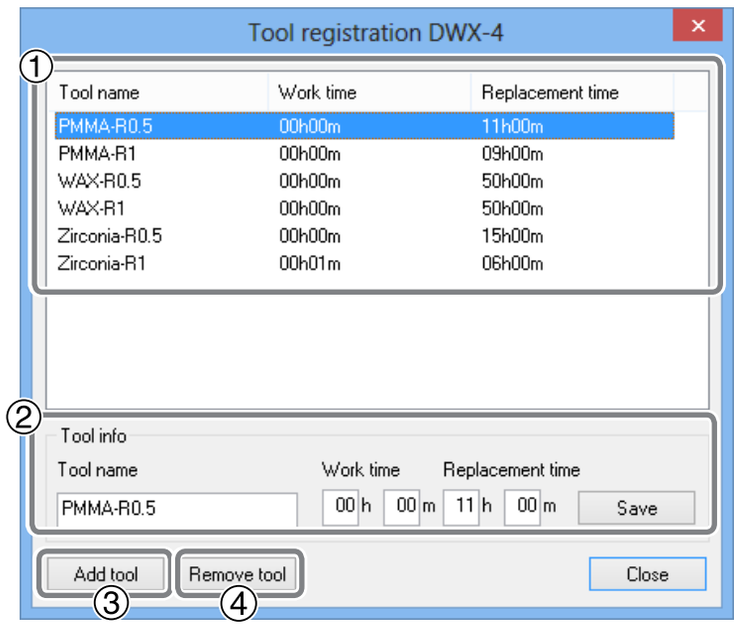
③ Tool registration

The tool for managing work time can be registered or deleted. Click on this button, and the "Tool registration" dialog will open.

☞ P. 14, ""Tool registration" Dialog"

"Tool registration" Dialog

In this dialog, you can register and delete a tool for managing work time. When more than one machine is connected, you can register or delete the tool for the machine selected on the top window.



① Tool list

Displays the names, work time, and replacement time of registered tools.

② Tool info

You can edit the name, work time, and replacement time of the tool selected in the tool list. By clicking on "Save," the current data will be overwritten with the edited result, which will be saved.
Since the replacement time depends on the type of the tool or workpiece or the cutting conditions, adjust the value of the replacement time as needed.

③ Add tool

You can additionally register up to 20 tools.

④ Remove tool

You can delete the selected tool from the tool list.

Chapter 2
Cutting

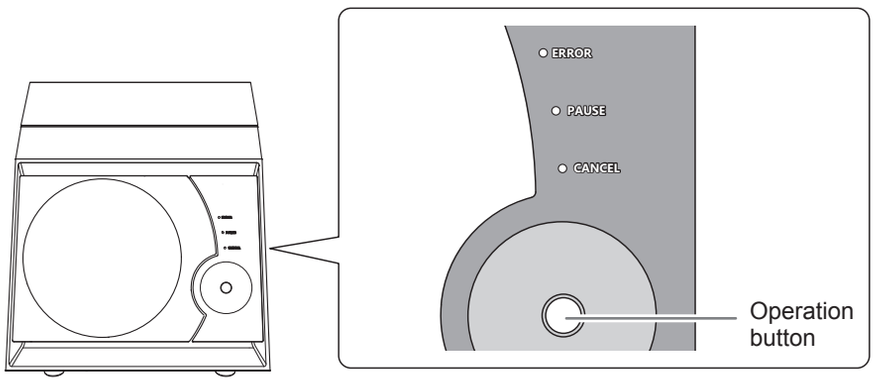
How to Use / Read the Built-in Panel 16
- How to Use / Read the Built-in Panel 16
- Colors and Statuses of Signal LED Lamp and Operation Button .. 16

Power On / Off 17
- Turn On the Power Switch 17
- Turn Off the Power Switch 17

Getting Ready to Cutting 18
- Preparation of Workpieces (Usable Workpieces) 18
- Preparation for Tool (Size of Tool That Can Be Used) 18
- Preparation for Supply of Compressed Air (Setting the Regulator) ... 18

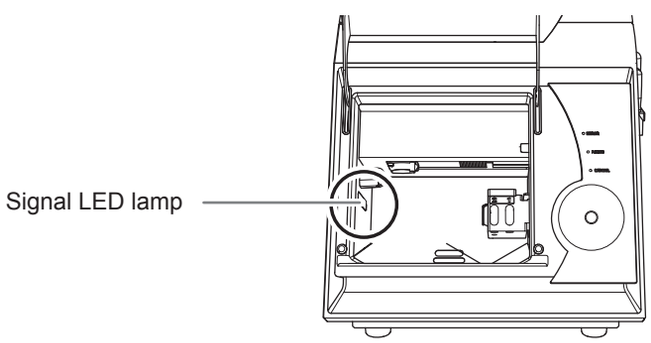
Starting Cutting 19
- STEP1: Attaching the Workpiece 19
- STEP2 : Attaching a Tool 22
- STEP3 : Outputting Cutting Data 23
- Quitting Outputting 24

How to Use / Read the Built-in Panel



ERROR	Flashes when an error has occurred.
PAUSE	Lights while the operation is paused.
CANCEL	Flashes while the data is canceled or the initial operation is performed. The cutting data received while the lamp is flashing is canceled.
Operation button	Press this button to operate, suspend, or restart the machine. Holding down this button will stop cutting. The button lights up when the power is turned on and flashes when the machine is in operation.

Colors and Statuses of Signal LED Lamp and Operation Button

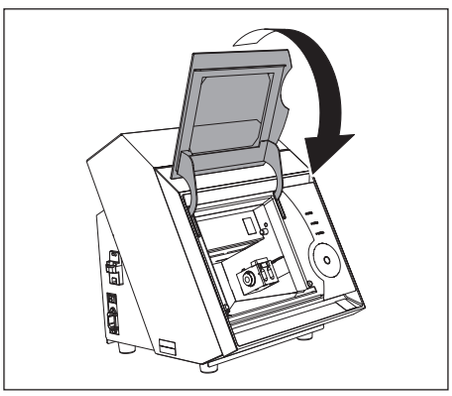


Blue	The machine is in the standby status or executing initialization. The shaft will rotate 180º when the operation button is pressed in the standby status. If the tool is mounted, it is returned to the ATC magazine. A lapse of 5 minutes without any operation during standby causes the signal LED lamp to be turned off.
White	Cutting is performed or suspended, or the front cover is open. Cutting will be suspended when the operation button is pressed. Cutting can be resumed by pressing the button again. Holding down the operation button will stop cutting.
Yellow	An error occurred, and cutting is suspended. Check details of the error displayed on the screen of VPanel. Cutting can be resumed by pressing the operation button.
Red	An error occurred, and cutting is suspended and cannot be resumed. Check details of the error displayed on the screen of VPanel. When the LED is lit, the machine will stop cutting and return to the standby status by holding the operation button depressed. When the LED is flickering, turn off the power, and turn it on again to restart the machine.

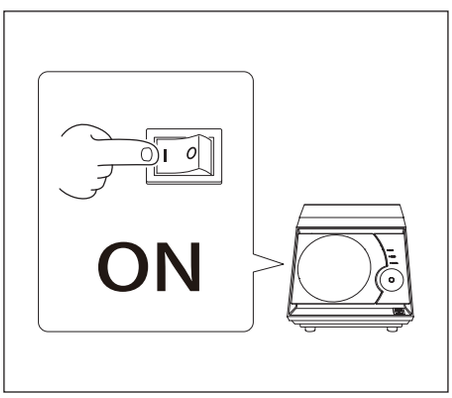
Power On / Off

Turn On the Power Switch

Procedure

❶ 

Close the front cover.

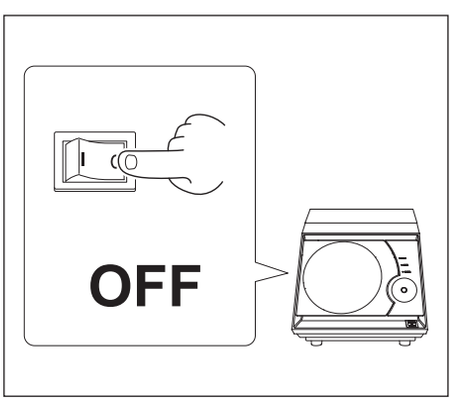
❷ 

Turn on the power switch of the machine.

The machine starts initialization. The status change of the signal LED lamp from flashing to lighting indicates the completion of initialization.

Turn Off the Power Switch

Procedure



Turn off the power switch of the machine.

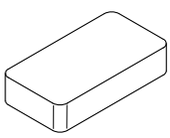
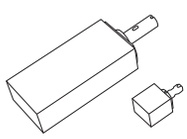
Getting Ready to Cutting

Preparation of Workpieces (Usable Workpieces)

Type of Workpieces

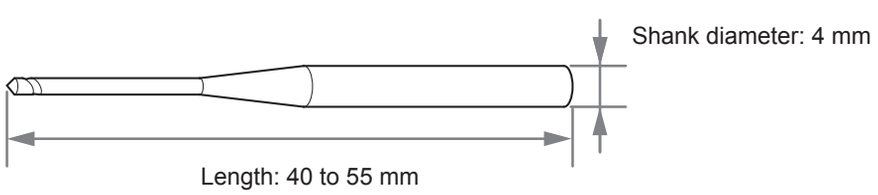
Zirconia (pre-sintered) , Wax , PMMA

Type and Size of Workpiece

Type		Size (Unit : mm)	
		Width × Depth	Height
Block		76×38	16 to 22
Workpiece with pin		Maximum 85×40	Maximum 22

Preparation for Tool (Size of Tool That Can Be Used)

The tool size that can be used is shown in the figure below.



* The shape of the tool is an example. Select an appropriate tool suitable for usage. To purchase a tool, contact the dealer where you purchased the milling machine.

Preparation for Supply of Compressed Air (Setting the Regulator)

Recommended Set Pressure

- Zirconia, WAX : 0.1MPa
- PMMA : 0.2MPa

IMPORTANT!

Important Notes on compressed air

Be sure to adjust to an air pressure of not more than 0.2 MPa. Exceeding this may cause malfunction.

STEP1: Attaching the Workpiece

Refer to the appropriate attachment procedure for the workpiece type to be used.

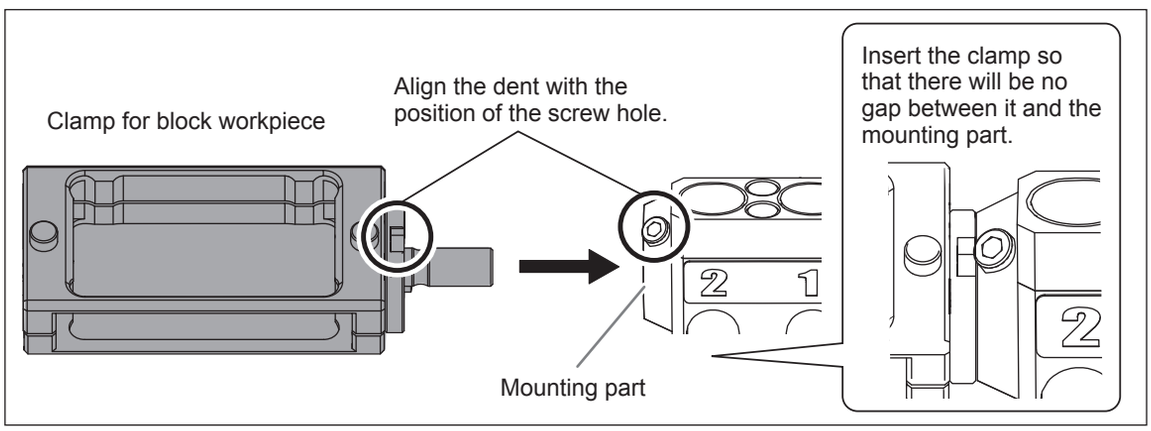
☞ P. 18, "Preparation of Workpieces (Usable Workpieces)"

Block Workpiece

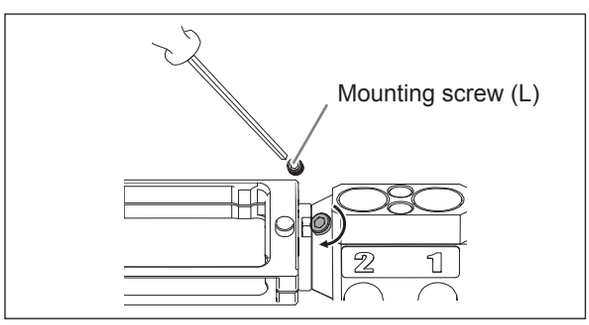
Procedure

❶ ① Close the front cover, and turn the power switch on.
② After the initial operation is completed, open the front cover.

❷ Insert the block workpiece clamp into the mounting part.
Hold the clamp as shown in the figure, and insert it all the way into the mounting part so that there will be no gap between them.

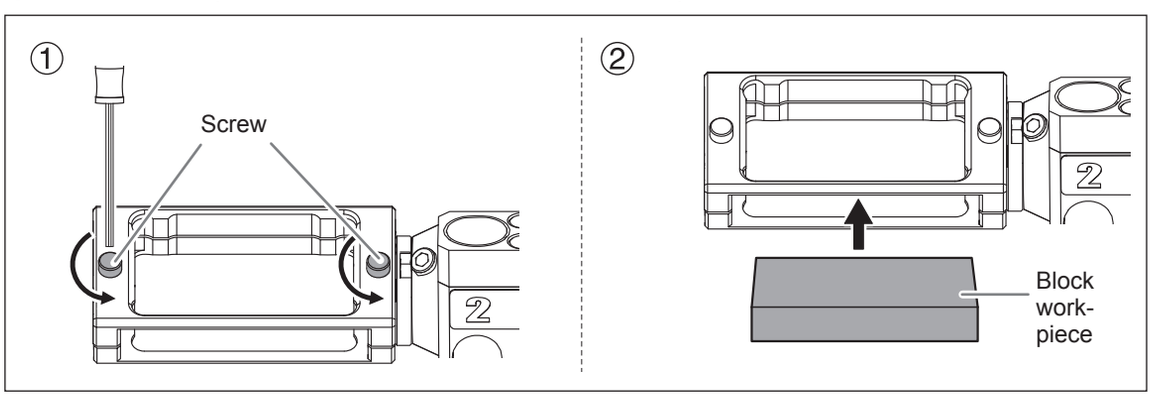

Clamp for block workpiece
Align the dent with the position of the screw hole.
Insert the clamp so that there will be no gap between it and the mounting part.
2 1
2
Mounting part

❸

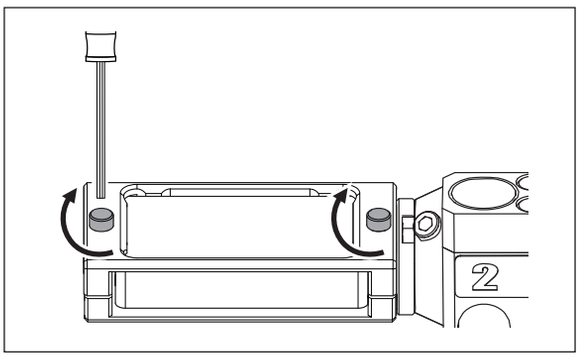


Tighten the mounting screw (L) with a hexagonal screwdriver (M).

❹ ① Loosen the screws of clamp with a hexagonal screwdriver (L) (2 places).
Tighten the screws according to the thickness of the workpiece.
② Attach a workpiece from the front side of the clamp.



❺



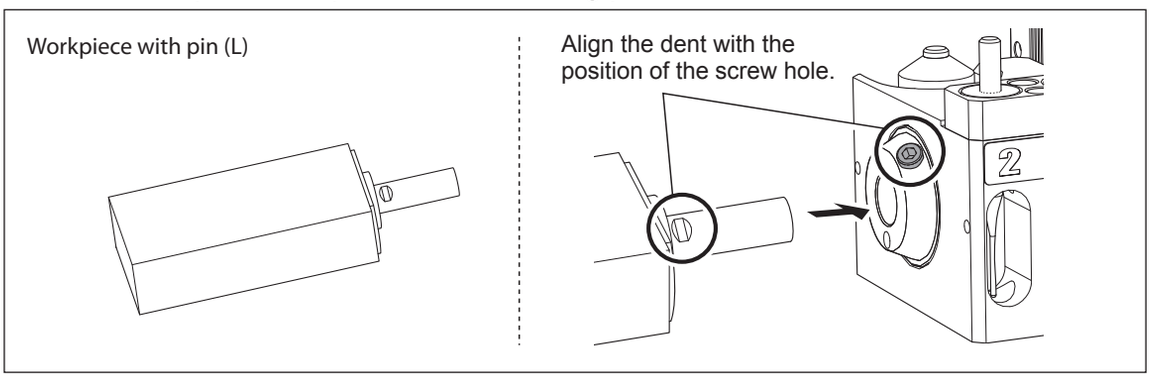
Tighten the screws of the clamp with a hexagonal screwdriver (L) (2 places).

Workpiece with Pin (L)

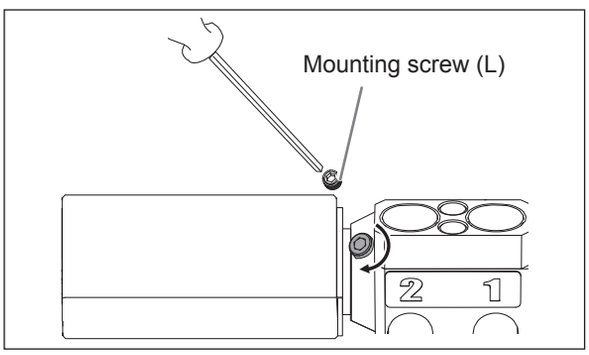
Procedure

❶ ① Close the front cover, and turned the power switch on.
② After the initial operation is completed, open the front cover.

❷ Insert the workpiece with pin into the mounting part.



❸



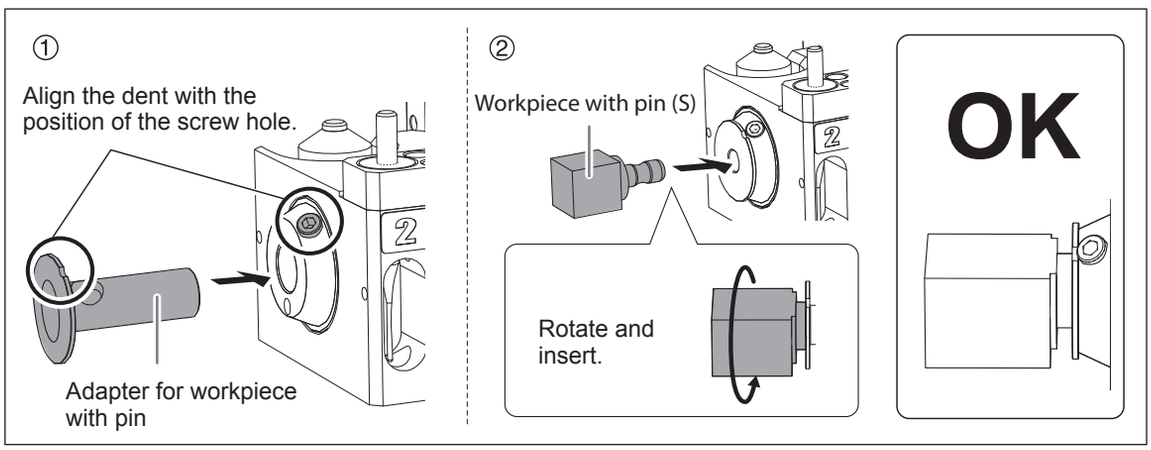
Tighten the mounting screw (L) with a hexagonal screwdriver (M).

Workpiece with Pin (S)

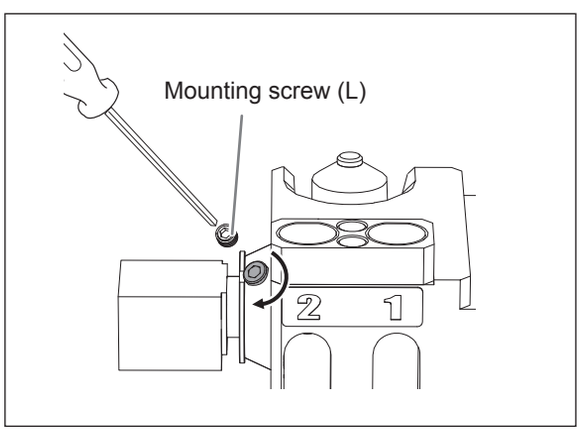
Procedure

❶ ① Close the front cover, and turned the power switch on.
② After the initial operation is completed, open the front cover.

❷ ① Insert the adapter for workpiece with pin into the mounting part.
② Attach a workpiece.
Adjust the position of the workpiece by rotating it, and insert it all the way until it stops.



❸

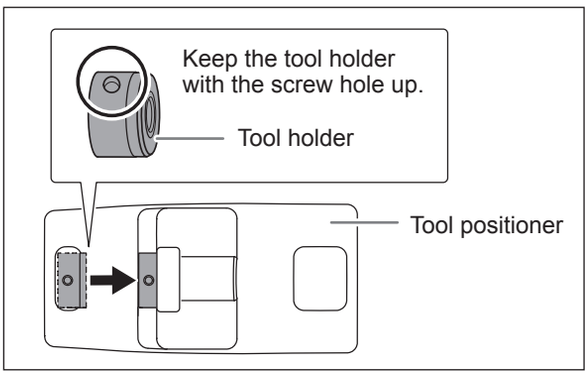


Tighten the mounting screw (L) with a hexagonal screwdriver (M).

STEP2 : Attaching a Tool

Procedure

❶



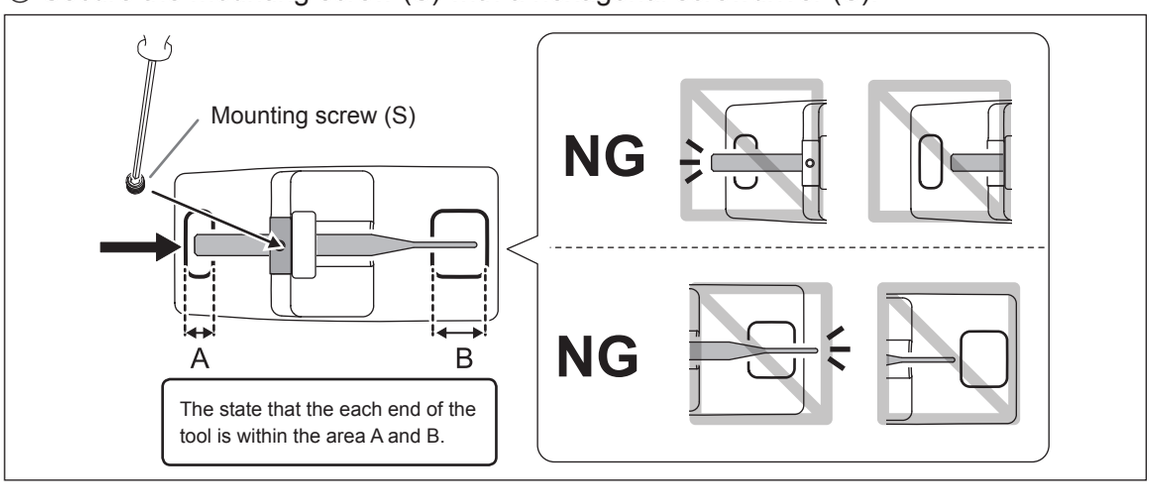
Place the tool holder on the tool positioner.

Press the tool holder to the end of the hole in the orientation shown in the figure.

❷ ① Insert the tool into the tool holder and determine the position.

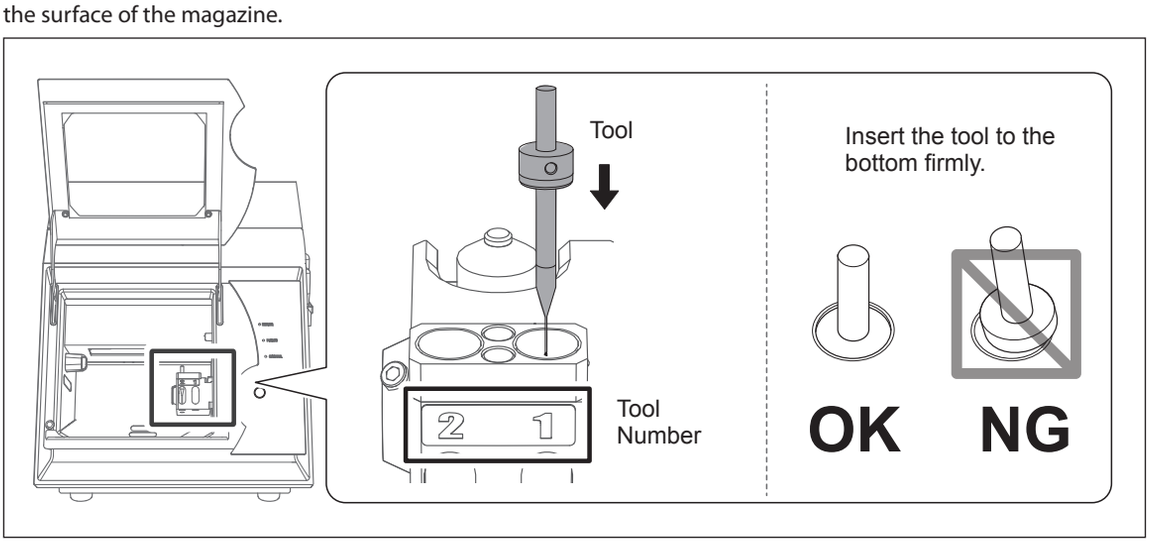
Insert the tool in the orientation shown in the figure so that the both ends are located within the ranges of the holes of the tool positioner.

② Secure the mounting screw (S) with a hexagonal screwdriver (S).



❸ Set the tool on the ATC magazine.

Insert the tool to the bottom firmly. The ATC magazine can accommodate 2 tools. The tool numbers are printed on the surface of the magazine.

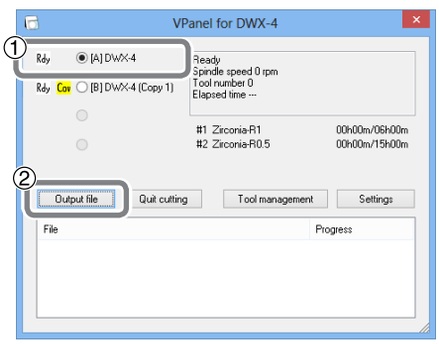


STEP3 : Outputting Cutting Data

* You can also use commercial CAM software to output cutting data. For information on compatible CAM software, contact the dealer where you purchased the milling machine.

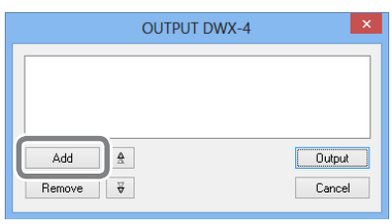
Procedure

❶



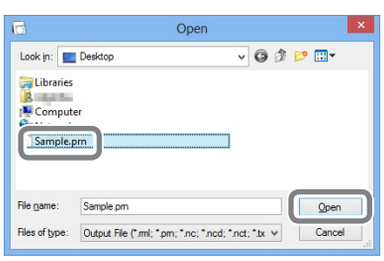
① In the top window of VPanel, select the machine that you wish to output.
② Click [Output file].
The "OUTPUT" window is displayed.

❷



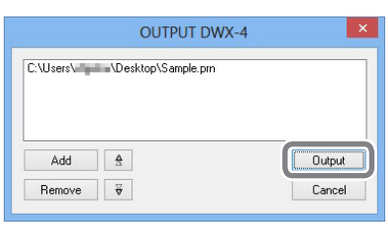
Click [Add].
The "Open" window is displayed.

❸



Select cutting data and click [Open].
The selected cutting data is displayed in the data list of the "OUTPUT" window.
Repeat the procedures ❷ and ❸ to output the cutting data continuously.

❹



Click [Output].

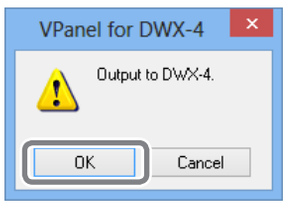
Tips!

Changing the order in the data list
You can change the output order by selecting the cutting data and click or in the data list. (The cutting data is output from the top of the data list.)

Deleting cutting data in the data list
You can delete the cutting data by selecting the cutting data in the data list and click [Remove].

Adding cutting data by drag & drop
You can add cutting data by drag & drop data on the window displayed in the procedures ❶ and ❷.

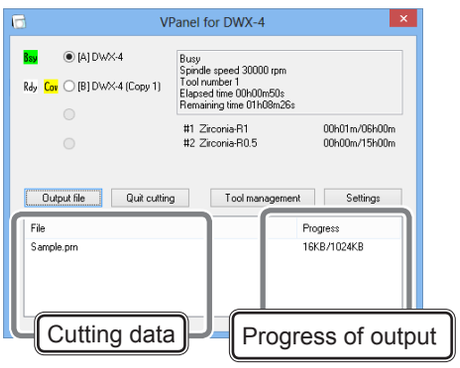
❺



Check that a workpiece and a tool have been mounted on the milling machine, and then click [OK].

☞ P. 19, "STEP1: Attaching the Workpiece"

❻

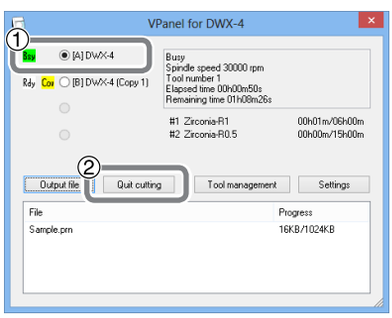


The output cutting data is displayed in the output list of the top window, and cutting starts.

Quitting Outputting

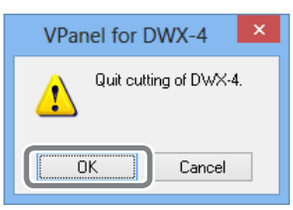
Procedure

❶



① In the top window of VPanel, select the machine that you wish to quit outputting.
② Click [Quit cutting].

❷



The message shown in the figure is displayed.
Click [OK] when you cancel the output. Click [Cancel] when you do not cancel the output.

Chapter 3 Maintenance

Precautions about Maintenance 26
- Important Notes on Care and Maintenance 26

Daily Maintenance 27
- Cleaning after Cutting Operation Ends 27

Periodic Maintenance 28
- Spindle Run-in (Warm-up) 28
- Correction of Milling Machine 29
- Care and Storage Methods of Detection Pin 30
- Retightening the Collet 31
- Care and Maintenance of the Regulator 33
- Replacing the Collet 34
- Cleaning the Inside and Applying Grease 35
- Replacing of the Spindle Unit 38

Precautions about Maintenance

Important Notes on Care and Maintenance

⚠WARNING **Never use a pneumatic blower.**
This machine is not compatible with a pneumatic blower. Cutting waste may get inside the machine and cause fire or electrical shock.

⚠WARNING **Never use a solvent such as gasoline, alcohol, or thinner to perform cleaning.**
Doing so may cause fire.

⚠WARNING **Never use a vacuum cleaner to take up cutting waste.**
Taking up fine cuttings using an ordinary vacuum cleaner may cause danger of fire or explosion.

⚠WARNING **Caution: high temperatures.**
The cutting tool and spindle motor become hot. Exercise caution to avoid fire or burns.

⚠CAUTION **When performing maintenance, be sure to keep the tool detached.**
Contact with the blade may cause injury.

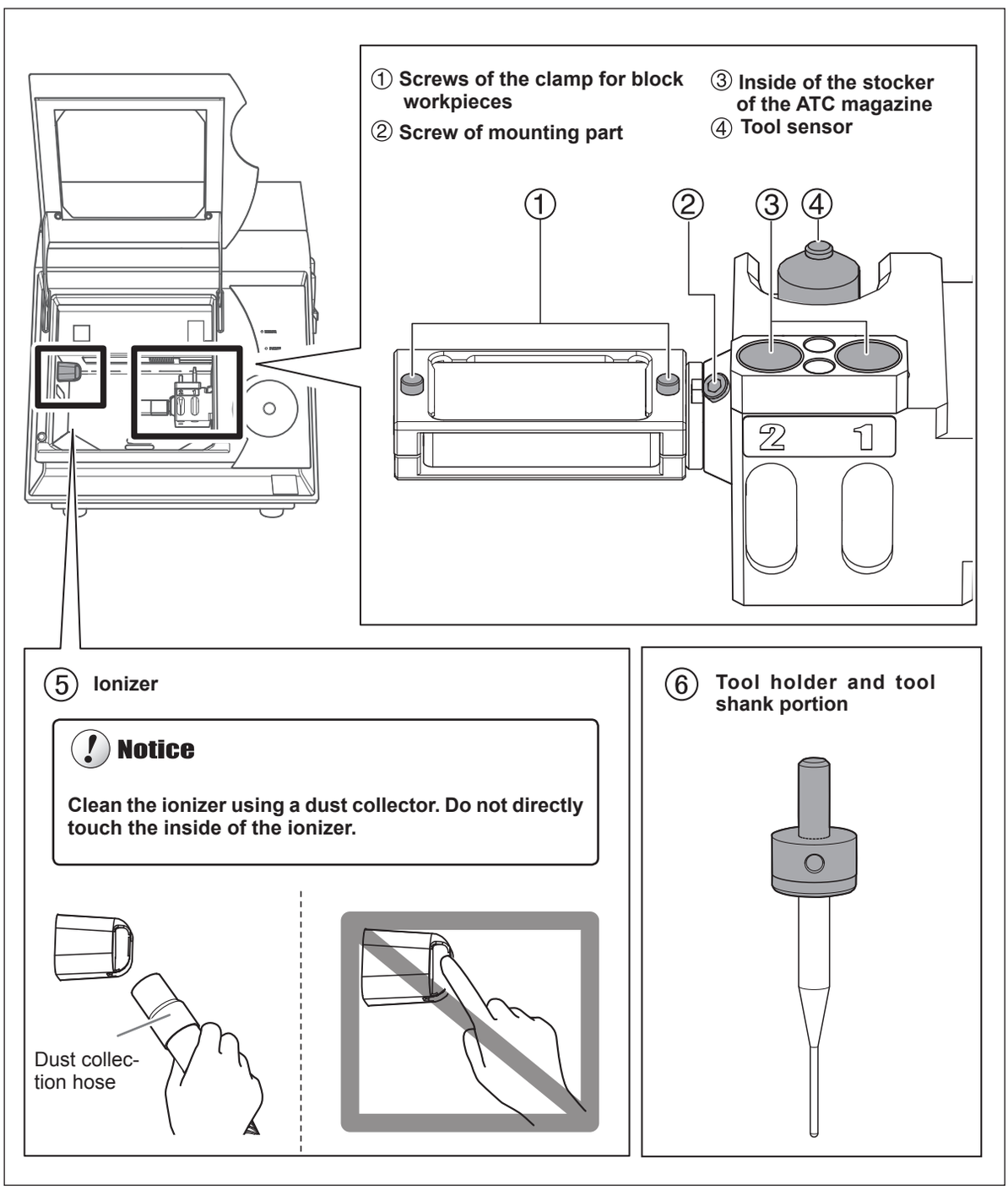
- This machine is a precision device. Carry out daily care and maintenance.
- Carefully clean away cutting waste. Operating the machine with a large amount of cutting waste present may cause malfunction.
- Never apply silicone substances (oil, grease, spray, etc.) to the machine. Doing so may cause poor switch contact or a cause of failure of an ionizer.
- Do not lubricate any place except for the lubrication locations shown in this document.

Cleaning after Cutting Operation Ends

After cutting, clean the cutting area using a commercially available brush or dust collector. Carefully remove cutting waste from the portions of ① to ⑥ in particular because the cutting result may be affected if cutting waste remain on them.

Cases Where You Need to Perform This Task

➢ After cutting


① Screws of the clamp for block workpieces
② Screw of mounting part
③ Inside of the stocker of the ATC magazine
④ Tool sensor
1
2
3
4
2
1
⑤ Ionizer
Notice
Clean the ionizer using a dust collector. Do not directly touch the inside of the ionizer.
Dust collection hose
⑥ Tool holder and tool shank portion

Spindle Run-in (Warm-up)

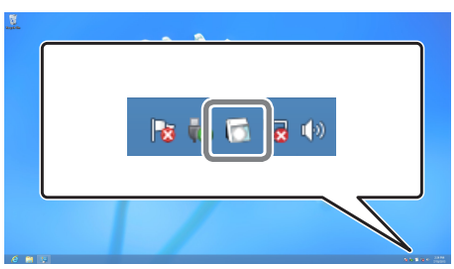
To stabilize the rotation of the spindle, a spindle run-in (warm-up) may be needed.

Cases Where You Need to Perform This Task

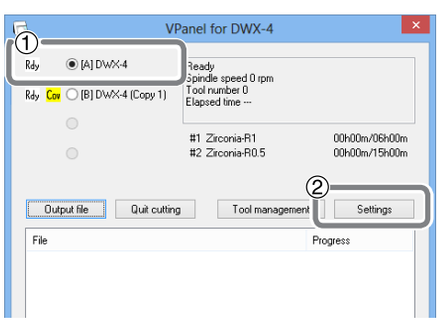
- When you finish installing the machine
- When the spindle unit is replaced
- When the machine is not used for a prolonged period
- Before you start using the machine in low room temperature

Procedure

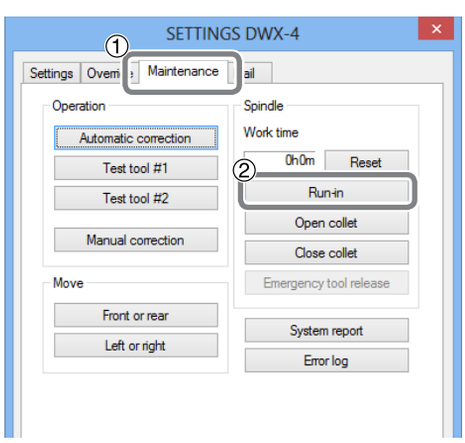
1. Close the front cover, and turn on the power.

2. 

   Display VPanel.
   ☞ P. 5, "Displaying VPanel"

3. 

   ① In the top window of VPanel, select the machine that you wish to perform the spindle run-in.
   ② Click [Settings].

4. 

   ① Click [Maintenance] tab.
   ② Click [Run-in].
   The spindle run-in operation starts.

Correction of Milling Machine

The accuracy of the milling machine may vary if it is used for a long period of time or the surrounding environment changes. With automatic correction, the ATC magazine and the rotary axis will be in the right position.

Cases Where You Need to Perform this Task

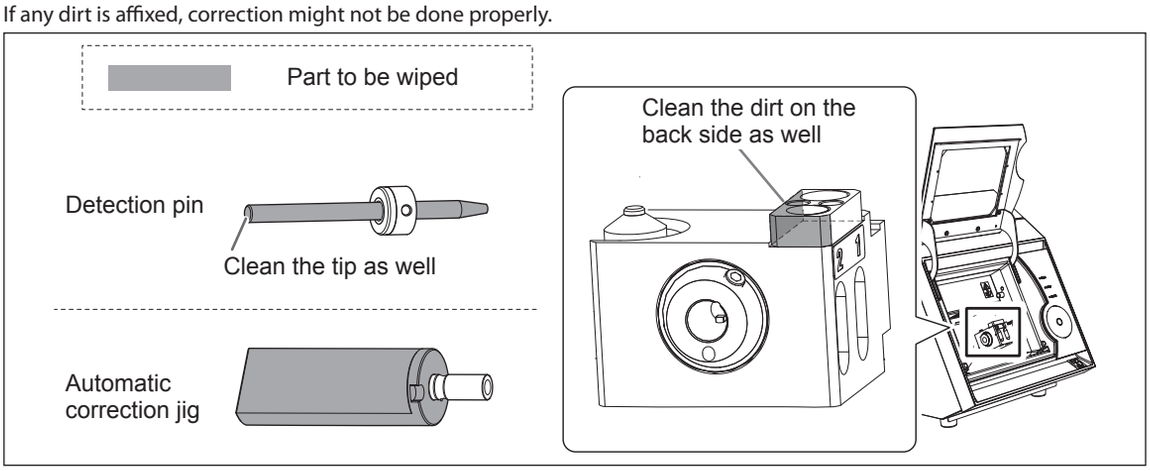
- When you finish installing the machine
- When you finish moving the machine
- When the cutting position is misaligned
- When there is a level difference or a hole is created in the Z direction, etc. in cutting result

Required Items

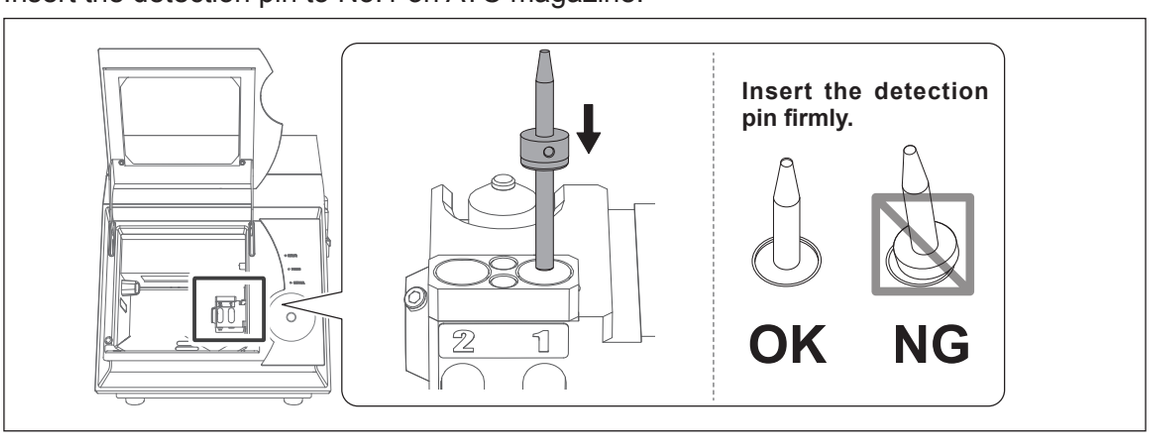
・Detection pin ・ Automatic correction jig ・Hexagonal screwdriver (M) ・ Cloth for care

Procedure

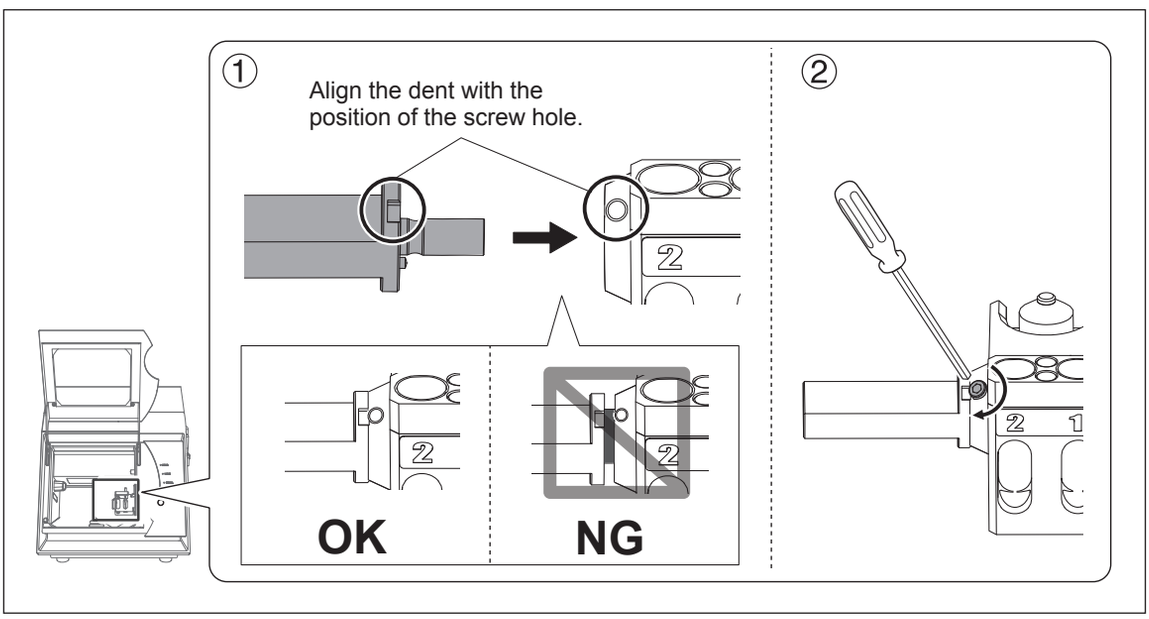
1. If a workpiece, clamp, or tool is attached to the machine, remove it.
2. Remove cutting waste and contamination from the milling machine.
   Remove cutting waste according to "Cleaning after Cutting Operation Ends" on page 27.
3. Clean the detection pin, automatic correction jig and ATC magazine with the supplied cloth for care.
   If any dirt is affixed, correction might not be done properly.



4. Insert the detection pin to No.1 on ATC magazine.

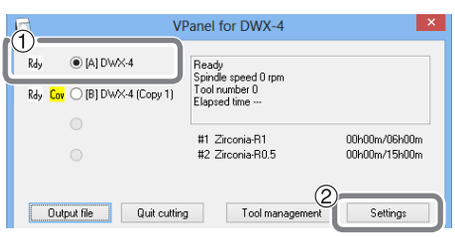


❺ Install the automatic correction jig.
① Install the automatic correction jig without making space.
If you align the recess of the tool with the screw hole of the mounting part, you can insert the tool to the end.
② Tighten the mounting screw (L) with a hexagonal screwdriver (M).



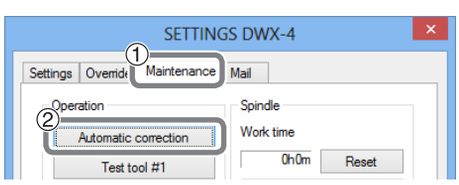
❻ Close the front cover.

❼



① In the top window of VPanel, select the machine that you wish to perform automatic correction.
② Click [Settings].
The "SETTINGS" window is displayed.

❽



① Click [Maintenance] tab.
② Click [Automatic correction] tab.
Start the automatic correction by following the displayed instructions.

❾ Remove the detection pin and automatic correction jig.
You can remove the automatic correction jig by rotating the mounting screw which secures the automatic correction jig about 2 turns.

Care and Storage Methods of Detection Pin

For correction, you use detection pin. The detection pin that gathers rust or dust will prevent the accurate detection, which may result in the situation where you cannot perform cutting as intended or where the machine should be damaged.

Care and Storage Methods

- Before use, wipe clean using the dry clean cloth (included with product), and make sure that any dust, rust, or scratches are not on the detection pin.
- Store in a location with low humidity and little fluctuation in temperature.

Retightening the Collet

While you continue cutting, the collet is loosened, and consequently the tool is likely to come off. Retighten the collet at regular intervals.

Recommended Retightening Interval

➢ Monthly or when the total working time of the spindle exceeded 200 hours (slightly different depending on the work situation.)

☞ P. 38, "Checking the total working time of the spindle using VPanel"

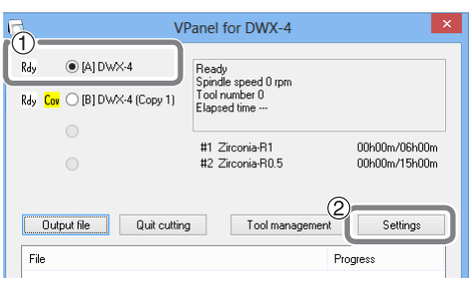
Required Items

・Detection pin ・Spanner

Procedure

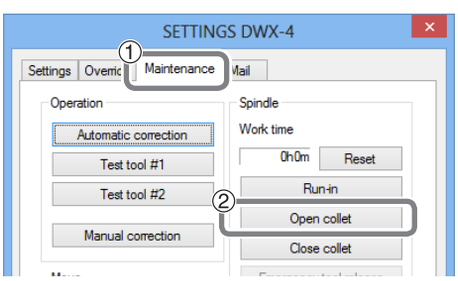
❶ If a workpiece, clamp, or tool is attached to the machine, remove it.

❷



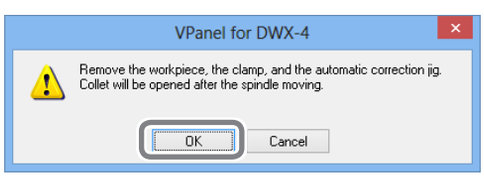
① In the top window of VPanel, select the machine that you wish to retighten the collet.
② Click [Settings].

❸



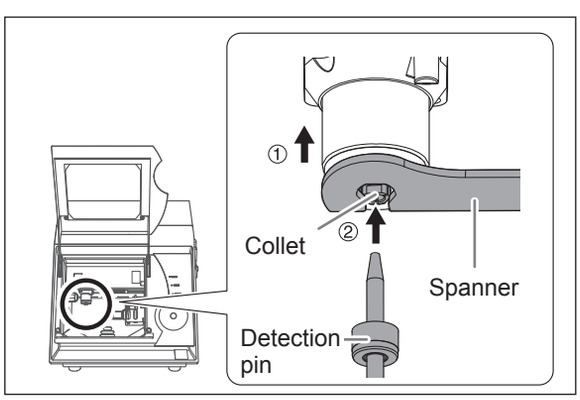
① Click [Maintenance] tab.
② Click [Open collet].

❹


VPanel for DWX-4
Remove the workpiece, the clamp, and the automatic correction jig.
Collet will be opened after the spindle moving.
OK
Cancel

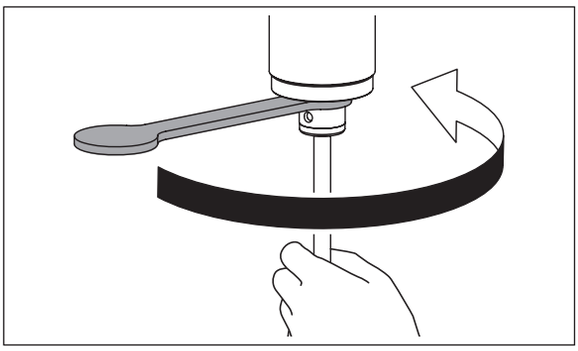
Click [OK].
The spindle moves and the collet is opened.

❺



① Fit the spanner on the collect.
Use the included spanner.
② Insert the detection pin into the collet.
If the detection pin can not be inserted, carry out the operation described in ❸ again.

⑥

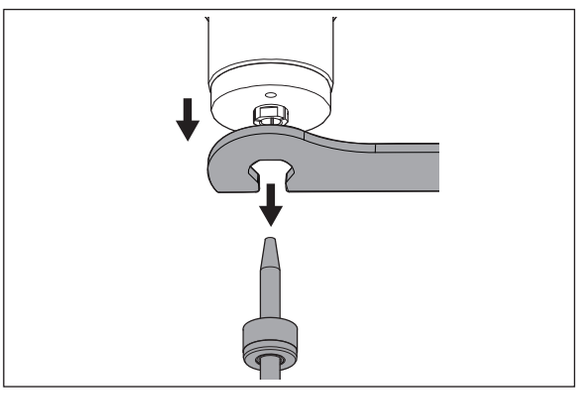


While holding the detection pin by hand, loosen the collet with spanner.

IMPORTANT!

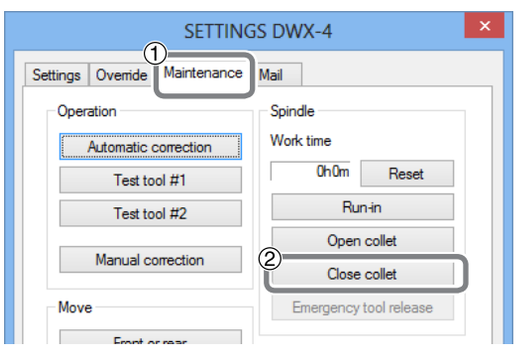
Attach or detach the collet using the spanner included, with the detection pin inserted. If the detection pin is not inserted, there is a possibility that the collet is deformed to lower the cutting accuracy.

⑦



Detach the detection pin and the spanner, and then close the front cover.

⑧



① Click [Maintenance] tab.
② Click [Close collet].

The operation is completed if the spindle moves and "Operation completed" is displayed.

Care and Maintenance of the Regulator

The regulator is equipped with a filter that becomes filled with drain (moisture and dust) over time. Periodically empty the drain. If the interior of the bowl becomes soiled, remove and wash the bowl.

Cases Where You Need to Perform this Task

- When drain collects
- When the bowl is contaminated

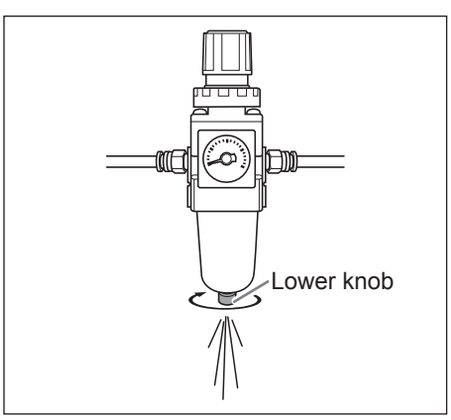
⚠WARNING **Before removing the bowl, be sure to bleed off the air pressure.**
Failure to do so may cause danger of repute or thrown-off parts.

⚠WARNING **Clean the bowl using a neutral detergent. Never use gasoline, alcohol, thinner, or any other solvent.**
Using a solvent may degrade the bowl and cause danger of rupture.

Empty the Drain

Procedure

1. Stop the supply of compressed air.

2. 

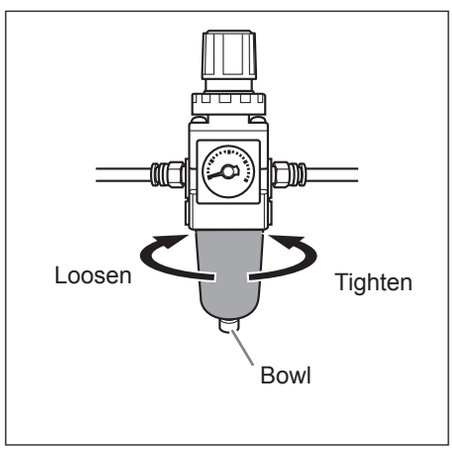
① Loosen the lower knob a little at a time.
Material may spray out of the drain at this time. Use a cloth or the like to catch the spray and keep it from scattering.
② When the drain is emptied, retighten the lower knob.

Cleaning the Bowl

Procedure

❶ Stop the supply of compressed air.

❷



① Detach the bowl.
Wash it using a neutral detergent.
② Make sure that the bowl dries out completely, then retighten the bowl.

Replacing the Collet

The collet is a part that wear out. With errors like excessive load, the collet can be deformed. In this case the collet needs to be replaced. To replace the collet, refer to the manual, which is attached to the collet for replacement.

Cleaning the Inside and Applying Grease

Cases Where You Need to Perform this Task

- When abnormal noise occurs when the machine is running
- Approximately once every 500 hours

Required Items

・Grease (Use the grease included with product) ・Grease application stick

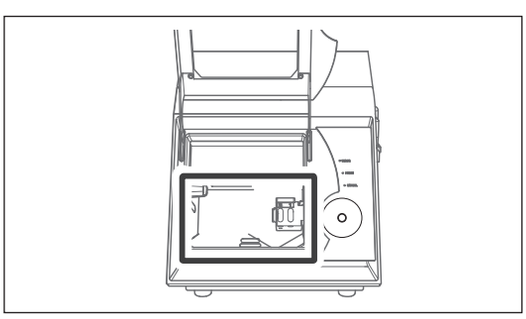
⚠WARNING **Before starting maintenance, turn off the machine's power switch and unplug the power cord from the machine.**
Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.

⚠CAUTION **Be sure to follow the replacement procedure provided in this manual. You must not touch any parts except for those specified in the instructions.**
An unexpected operation of the machine may cause injury and burn.

⚠CAUTION **Secure the maintenance cover with the screw when opening the cover.**
Neglecting to do so may cause the maintenance cover to fall down and your fingers to get caught in the space between the cover and the machine.

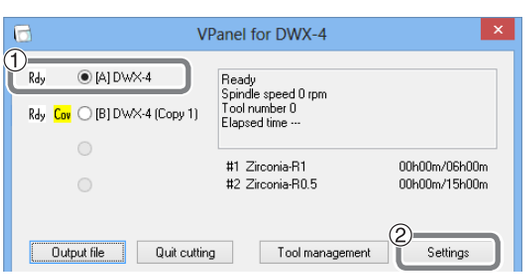
1. Open the maintenance cover.

❶



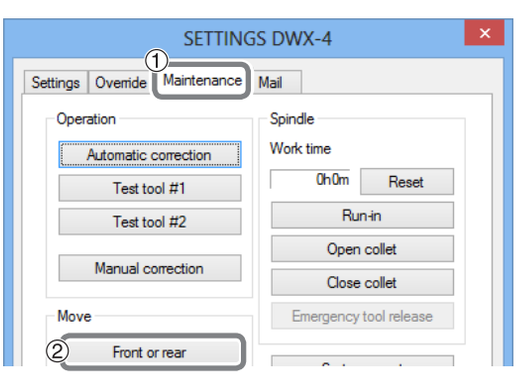
Open the front cover, and remove cutting waste remaining inside.
If cutting waste remain, they may spatter around when you open the maintenance cover.

❷



① In the top window of VPanel, select the machine that you wish to perform maintenance.
② Click [Settings].

❸

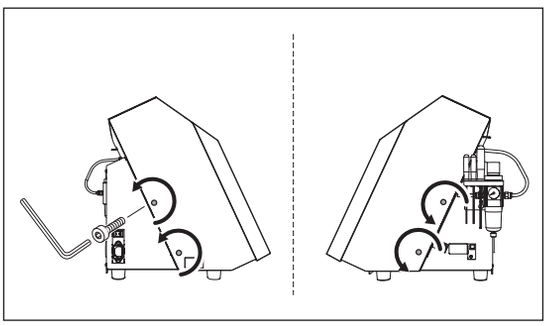


① Click [Maintenance] tab.
② Click [Front or rear].
To maintain the Y-axis, move the rotary axis unit backward before opening the maintenance cover.

❹ Turn off the power switch, and disconnect the power cord.

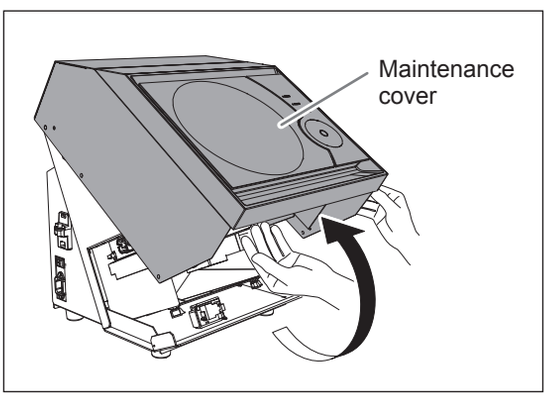
⚠**WARNING** **Before starting maintenance, turn off the machine's power switch and unplug the power cord from the machine.**
Attempting such operations while the machine is connected to a power source may result in injury or electrical shock.

❺



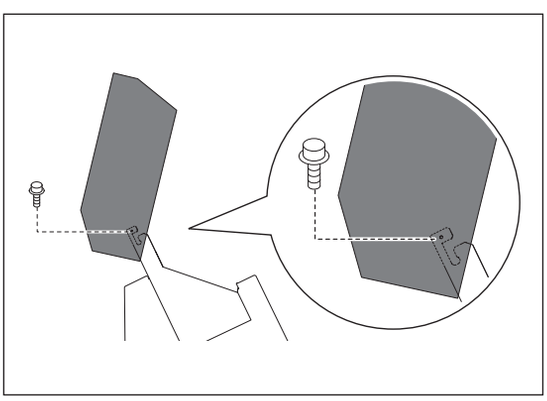
Using hexagonal wrench, remove the screws at the positions shown in the figure (4 locations).

❻



Open the maintenance cover.
Slowly lift up the cover with both hands.

❼



Temporarily fix the cover using one of the screws removed in ❺.

2. Clean the inside, and apply the grease.

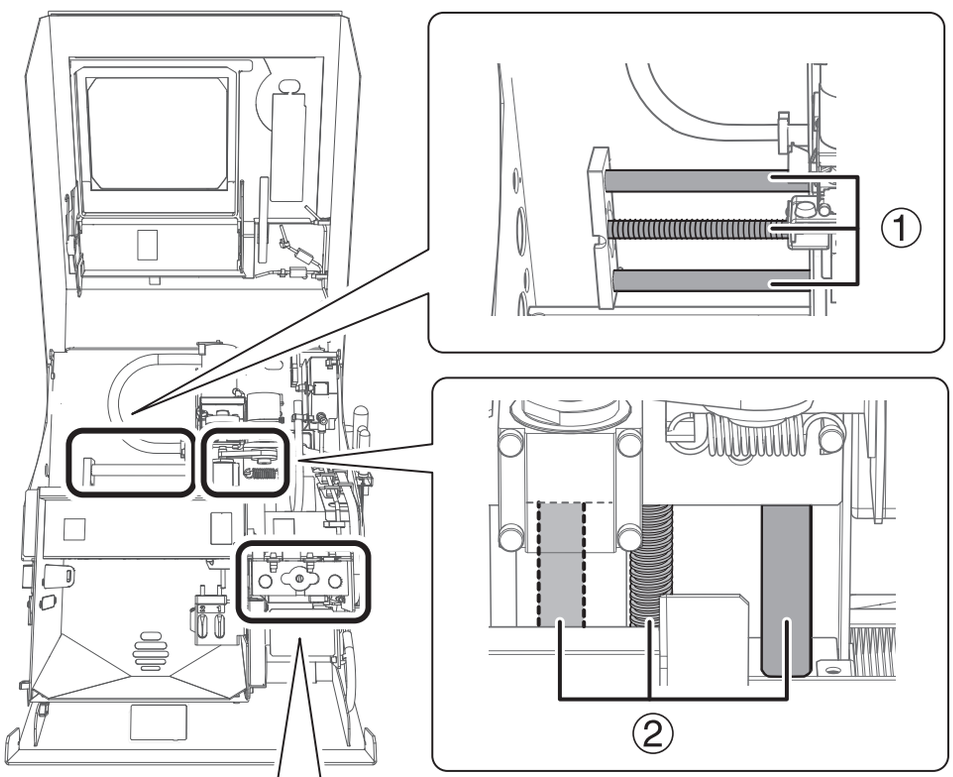
❶ Clean the inside.

If cutting waste collect inside, remove them with a dust collector. Remove cutting waste on the shaft with a dust collector or a commercially available brush.

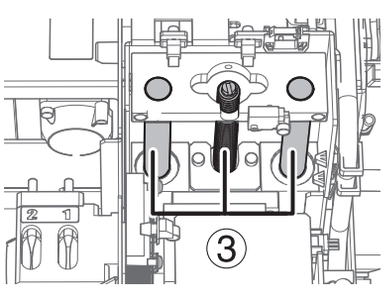
❷ Apply a thin layer of grease to the drive screws and the shafts shown in the figure below.

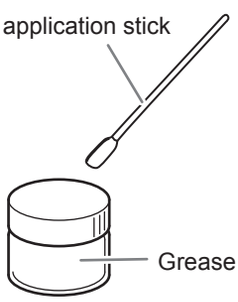
If the grease on the surface of the shaft is dried, apply a thin layer of the attached grease to the surface of the shaft.
The shaft and drive screws to be maintained: ① to ③

Important Note
Do not manually move the movable portions of the spindle unit, etc. by force. Since the grease will spread as the machine is used, there is no need to apply it to portions other than the visible one. Wipe off the grease if it adheres to portions other than the shaft.



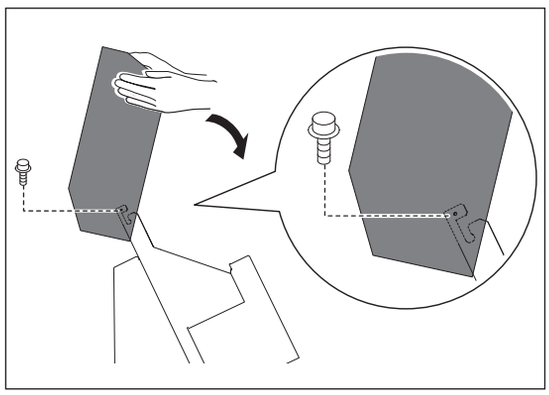
Point **Look in from underneath.**





3. Close the maintenance cover.

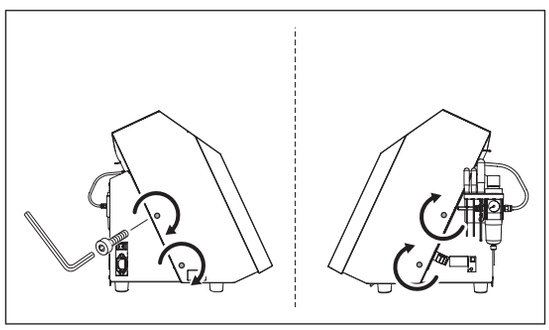
❶



Close the maintenance cover.

Remove the screw securing the cover. Close the cover slowly with both hands.

❷



Secure the maintenance cover.

Secure the cover with the screws.

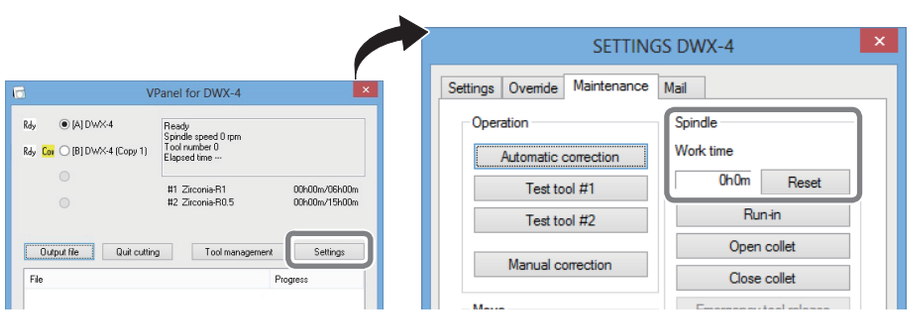
Replacing of the Spindle Unit

Recommended Replacing Interval

- When the total working time of the spindle exceeded 2,000 hours (slightly different depending on the work situation.)

The spindle unit and the belt are parts that wear out. You can use VPanel to view the total working time of the spindle. Refer to this to determine when replacement is needed. Refer to the manual included with the spindle unit for replacement.

Checking the total working time of the spindle using VPanel



Chapter 4
Read This Chapter Whenever You Face a Problem. (FAQ)

What to Do If… 40
- Initialization Is Not Performed or Initialization Fails 40
- The Operation Button Does Not Respond 40
- VPanel Does Not Recognize the Machine.....40
- Cutting Data Can Not Be Output to the Machine, or the Machine Does Not Operate Although Cutting Data Is Output to It.....41
- The Computer Shut Down When Plural Machines Were Connected ... 41
- The Ionizer Is Not Effective (Cutting Waste Adhere to the Around Wall of Cutting Area) .. 41
- Compressed Air Does Not Come Out.....42
- Abnormal Noise Occurs.....42
- Automatic Correction Fails.....42
- Tool Management Information Was Lost 43
- The Cutting Results Are Not Attractive 43
- There Is a Level Difference in the Cutting Result 43
- Chipping Occurs (Edges of Cut Workpieces Become Chipped)... 43
- A Hole Opens in Cutting Result 44
- The Dimensions of Cutting Results Do Not Match 44
- To Install Driver Separately.....45
- To Install Software and Electronic Manual Separately.....48
- Installation Is Impossible.....49
- Uninstalling the Driver.....50
- Uninstalling the VPanel.....51

Responding to an Error Message.....52

What to Do If…

Initialization Is Not Performed or Initialization Fails

Is a front cover open?

When starting the machine, make sure that the front cover is closed. For safety, initialization is not performed when a cover remains open at startup.

Is anything caught on the spindle unit or rotary axis unit?

Check whether something has become caught and is impeding initialization.

Is the tool snagged?

The tool attached to the spindle unit or rotary axis unit may fail to perform initialization if it is snagged on the attachment. Try to detach the tool using the emergency tool release function of VPanel.

☞ P. 10, ""Maintenance" Tab"

The Operation Button Does Not Respond

Is a front cover or maintenance cover open?

Some operations of the machine will be limited if the front cover or the maintenance cover is open. Close all the cover.

Are you operating the operation button with a glove on?

The operation button does not respond if you wear a glove. Operate the operation button with a bare hand.

VPanel Does Not Recognize the Machine

Is the cable connected?

Make sure that the cables are connected.

☞ "Setup Guide" ("Connecting Cables")

Is the driver installed correctly?

If the connection to the computer is not made in the sequence described, the driver may fail to be installed correctly. Unless a driver is suitable, VPanel does not work. Check again to ensure that the connection was made using the correct procedure.

☞ "Setup Guide" ("Installing and Setting Up the Software")
☞ P. 48, "To Install Software and Electronic Manual Separately"
☞ P. 49, "Installation Is Impossible"

Is the procedure correct when plural machines are connected or when the ID of any machine is changed?

There is a possibility that the connection method might be incorrect when more than one machine is connected. Check the correct connection method. After the ID of a machine was changed, it is necessary to restart the machine and VPanel.

☞ "Setup Guide" ("Connecting Multiple Units")
☞ P. 5, "Displaying or Exiting VPanel"

Cutting Data Can Not Be Output to the Machine, or the Machine Does Not Operate Although Cutting Data Is Output to It

Is the front cover or maintenance cover open?

If the front cover or maintenance cover is open, the machine does not start cutting even if it receives cutting data. Close all covers, and press the button of the machine. Cutting will begin.

Does VPanel recognize the machine?

Make sure that a message other than "Offline (Off displayed)" is displayed on the screen of VPanel.

When plural machines are connected, is the selected machine correct?

Select a machine to which you want to output cutting data on the screen of VPanel.

Is operation paused?

When the PAUSE LED is on, it means that operation is paused. When the machine is paused, cutting stops and some operations are restricted. When you press the operation button of the machine shortly, the pause is canceled. When you hold down the operation button, cutting is stopped.

Is initialization or data cancel in progress?

The cutting data received in the middle of initialization or data cancel will be cancelled. Output cutting data after confirming that the machine is in the standby status.

Is the cutting data correct?

Check the cutting data.

Does any error exist?

The error LED will flicker if an error occurs. Details of the error will be displayed on the screen of VPanel.

☞ P. 52, "Responding to an Error Message"

The Computer Shut Down When Plural Machines Were Connected

Is a machine with a same ID connected to the computer?

When more than one machine is connected to the computer, if machines with a same ID are connected at the same time, the computer might shut down. If the computer shuts down, turn off the power of all the connected machines and disconnect the USB cables from the computer.
Next, restart the computer, and then start VPanel. If VPanel does not start, install it again. Then, make the setting again in a way that a same ID is not assigned to more than one machine.

☞ "Setup Guide" ("Connecting Multiple Units")

The Ionizer Is Not Effective (Cutting Waste Adhere to the Around Wall of Cutting Area)

Is the workpiece being cut PMMA?

The ionizer (static eliminator) is effective for only PMMA and is not effective for zirconia or wax.

Is the area around the ionizer covered with cutting waste?

If cutting waste adhere to this area, remove them with a dust collector. The ionizer may become less effective if cutting waste adhere to this area. Do not touch the inside of the ionizer.

☞P. 27, "Cleaning after Cutting Operation Ends"

Is the machine grounded?

If the machine is not grounded, the effect of the ionizer can not be obtained.

Compressed Air Does Not Come Out

Is any of the operations which need compressed air being performed?

Compressed air is only supplied during some operations, such as the rotation of the spindle or the replacement of the tool.

Is the connection or pressure of the regulator set correctly?

Check the regulator for connection. Check if the memory of the regulator is 0. If the set pressure of the regulator is 0, compressed air will not be supplied.

☞ "Setup Guide" ("Preparing the Regulator")
☞P. 18, "Preparation for Supply of Compressed Air (Setting the Regulator)"

Is the knob at the bottom of the regulator open?

If the knob at the bottom of the regulator is open, compressed air flows out.

☞ P. 33, "Care and Maintenance of the Regulator"

Abnormal Noise Occurs

Are the shaft and the drive screws contaminated? Has the grease run out?

Clean the guide shaft and the drive screws, and apply the attached grease to them. The machine is likely to generate noise at the initial stage after introduction. If abnormal noise occurs, apply the grease to the drive screws.

☞ P. 35, "Cleaning the Inside and Applying Grease"

Automatic Correction Fails

Is the automatic correction jig, detection pin, or ATC magazine contaminated?

Remove contamination on the automatic correction jig, detection pin, or ATC magazine if they are contaminated. If they are contaminated due to buildup of cutting waste or the like, the sensor cannot operate correctly, making correct detection impossible.

☞ P. 29, "Correction of Milling Machine"

Is the automatic correction jig properly attached?

Check the automatic correction jig to see if it is properly attached.

Is the detection pin properly attached?

Check the detection pin to see if it is properly attached. Check the position of the tool holder attached to the detection pin.

☞ P. 29, "Correction of Milling Machine"
☞ "Setup Guide" ("Specifications" "Detection Pin Dimension").

Tool Management Information Was Lost

Did you change any machine name (printer name)?

Tool information is saved by machine name (printer name). Before changing a machine name (printer name), record the contents of the tool information concerned. The tool information will be recovered by returning the machine name (printer name) to the original one.

The Cutting Results Are Not Attractive

Is the machine out of correction?

The origin point may be out of position due to a long period of use or the relocation of the machine and affect cutting results. Perform automatic correction. If expected cutting results cannot be obtained even after automatic correction was performed, perform manual correction.

☞ P. 29, "Correction of Milling Machine"
☞ P. 12, ""Manual correction" Dialog"

Is the workpiece securely mounted in place?

Check the mounting state of the workpiece. Fasten the workpiece in place securely so that the workpiece will not slip out of place or come off because of vibration during cutting or tool pressure.

☞ P. 19, "STEP1: Attaching the Workpiece"

Is the tool worn?

If the same tool is used for cutting for a long period of time, it will get worn and affect cutting results. Try to replace the tool with a new one. The work time of the tool can also be managed by VPanel.

☞ P. 13, ""Tool management" Dialog"

There Is a Line of Level Difference in the Cutting Result

Is the machine out of correction?

The origin point may be out of position due to a long period of use or the relocation of the machine and it causes a line of level difference in the cutting results. Perform automatic correction. If expected cutting results cannot be obtained even after automatic correction was performed, perform manual correction. For manual correction, changing the Y value in origin correction may improve the situation.

☞ P. 29, "Correction of Milling Machine"
☞ P. 12, ""Manual correction" Dialog"

Chipping Occurs (Edges of Cut Workpieces Become Chipped)

Is the tool worn?

If the same tool is used for cutting for a long period of time, it will get worn and affect cutting results. Try to replace the tool with a new one. The work time of the tool can also be managed by VPanel.

☞ P. 13, ""Tool management" Dialog"

Is the thickness specified in the cutting data excessively thin?

If the specified finish thickness of workpieces is excessively thin, chipping is apt to occur. Review the shape specified in the cutting data.

Is the collet deformed?

The collet may deform if the spindle nose (end of the spindle) strikes against the clamp, etc. or the spindle is locked. If the collet is deformed, replace it.

☞ P. 34, "Replacing the Collet"

Are the cutting conditions too strict?

Strict cutting conditions may affect cutting results. Review the cutting conditions of CAM.

A Hole Opens in Cutting Result

Is the thickness specified in the cutting data excessively thin?

The finish thickness of workpieces needs to be 0.5 mm or over. Check the thickness specified in the cutting data.

Is the machine out of correction?

The origin point may be out of position due to a long period of use or the relocation of the machine and affect cutting results. Perform automatic correction. If expected results cannot be obtained even after automatic correction was performed, perform manual correction. In manual correction, cutting results may be improved by shifting the Z origin point in the + direction.

☞ P. 29, "Correction of Milling Machine"
☞ P. 12, ""Manual correction" Dialog"

Are the cutting conditions too strict?

Strict cutting conditions may affect cutting results. Review the cutting conditions of CAM.

The Dimensions of Cutting Results Do Not Match

Does the diameter of the tool match the settings of CAM? Is the set shrinking percentage proper for the workpiece?

Check the settings of CAM.

Does the set temperature of the sintering program match the workpiece?

Check the set temperature of the sintering program to see if it matches the workpiece of the manufacturer used.

To Install Driver Separately

The driver, software, and the electronic manual can be installed together on this machine. For the method of installing them at a time, see "Setup Guide" ("Installing and Setting Up the Software.")

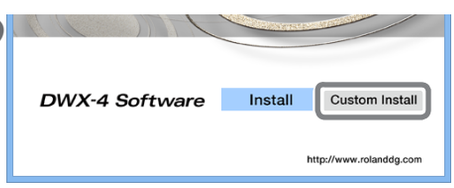
Procedure

1. Before installation, confirm that the machine and the computer are not connected with the USB cable.
2. Log on to Windows as “Administrators.”
3. Insert the Roland Software Package CD-ROM into the computer.
   When the automatic playback window appears, click [Run menu.exe]. The [User Account Control] appears, click [Allow], and install the softwares. The setup menu appears automatically.
   Uninstall the driver if it has been already installed.

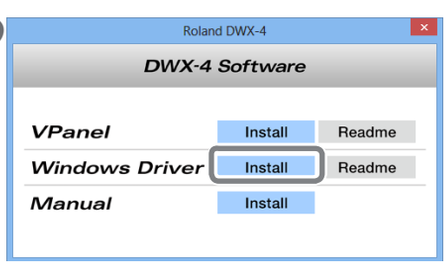
☞ P. 50, "Uninstalling the Driver"

Go to Step 4 if the driver is not installed or it is uninstalled.

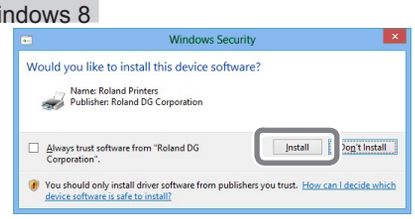
4. Click [Custom Install] of the "DWX-4 Software."



5. Click [Install] of the "Windows Driver."

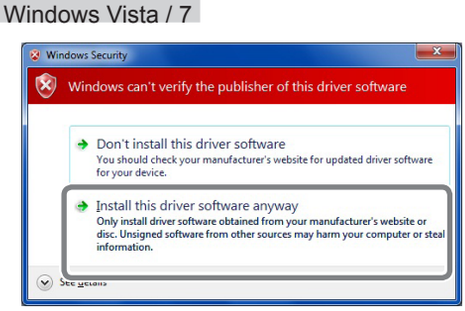


Windows 8


Windows Security
Would you like to install this device software?
Name: Roland Printers
Publisher: Roland DG Corporation
Always trust software from "Roland DG Corporation".
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

If the screen shown in the figure appears, click [Install].

Windows Vista / 7


Windows Security
Windows can't verify the publisher of this driver software
Don't install this driver software
You should check your manufacturer's website for updated driver software for your device.
Install this driver software anyway
Only install driver software obtained from your manufacturer's website or disc. Unsigned software from other sources may harm your computer or steal information.

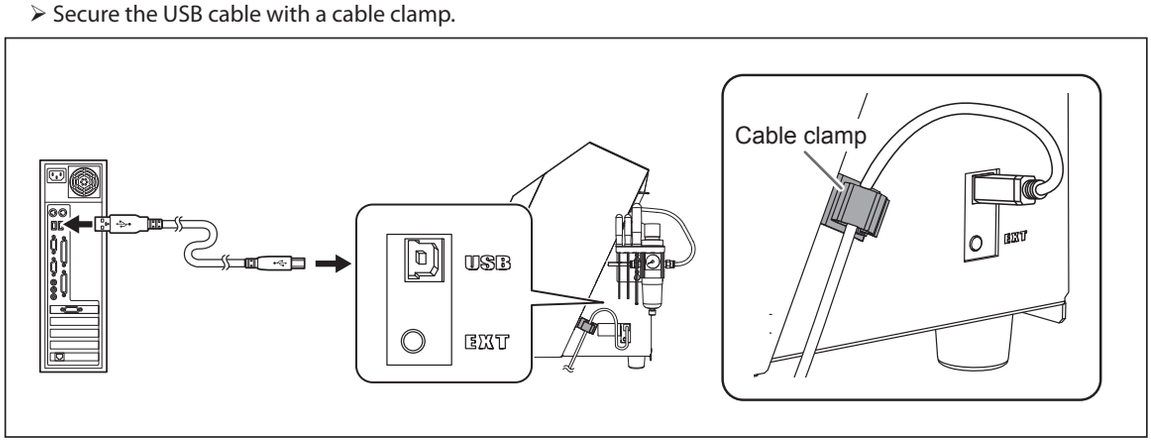
If the screen shown in the figure appears, click [Install this driver software anyway].

Windows XP

Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

If the screen shown in the figure appears, click [Continue Anyway].

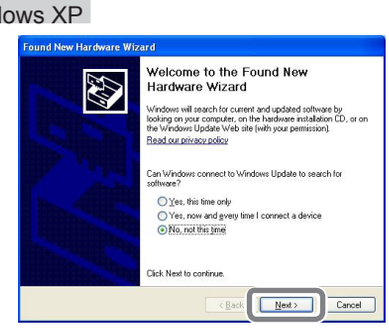
6. Follow the on-screen instructions and continue with the installation.
7. When installation finishes, click × of the setup menu.
8. Remove the CD-ROM from the CD-ROM drive.
9. Switch on the power to the machine.
10. Connect the machine and the computer with a USB cable.
    - ➢ If you connect more than one unit of this machine to a single computer, refer to "Setup Guide" ("Connecting Multiple Units").
    - ➢ Use the supplied USB cable.
    - ➢ Be sure to refrain from using a USB hub. If a USB hub is used, there is a possibility that the machine cannot be connected.
    - ➢ Secure the USB cable with a cable clamp.



Windows Vista / 7 / 8

The driver will be installed automatically.

Windows XP


Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

① Select [No, not this time], and then click [Next].

Found New Hardware Wizard
This wizard helps you install software for:
Roland
If your hardware came with an installation CD or floppy disk, insert it now.
Install the software automatically (Recommended)
Click Next to continue.
< Back
Next >
Cancel

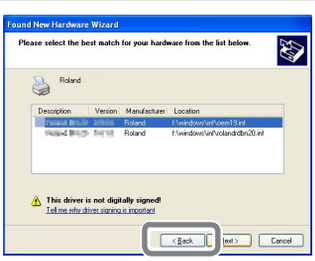
② Select [Install the software automatically], and then click [Next].

③ Click [Finish].

If the following screen is displayed during installation

Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Click [Continue Anyway].



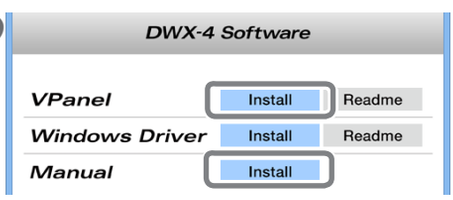
Eject and remove the CD-ROM, and then click [Back] and repeat from the last screen.

To Install Software and Electronic Manual Separately

The driver, software, and the electronic manual can be installed together on this machine. For the method of installing them at a time, see "Setup Guide" ("Installing and Setting Up the Software.")

Procedure

1. Log on to Windows as “Administrators.”
2. Insert the Roland Software Package CD-ROM into the computer.
   When the automatic playback window appears, click [Run menu.exe]. The [User Account Control] appears, click [Allow], and install the softwares. The setup menu appears automatically.
3.

   Click [Custom Install] of the "DWX-4 Software."
4. 

   Click [Install] of the "VPanel," or "Manual."
5. Follow the on-screen instructions and continue with the installation.
6. When installation finishes, click × of the setup menu.
7. Remove the Roland Software Package from the CD-ROM drive.

Installation Is Impossible

If installation quits partway through, or if the wizard does not appear when you make the connection with a USB cable, take action as follows.

Windows 8

1. Use a USB cable to connect the machine and the PC, and then turn the machine on.
2. If the [Found New Hardware] wizard appears, click [Cancel] to close it. Disconnect any USB cables for printers other than this machine.
3. Click [Desktop].
4. Move the mouse to the lower right corner to display Charm and click [Settings].
5. Click [PC Information].
6. Click [Device Manager]. When the [User Account Control] screen appears, click [Continue]. The [Device Manager] screen appears.
7. Click [Show hidden devices] on the View menu.
8. Double-click [Printers] or [Other devices] in the list. Click the model name or [Unknown device], whichever appears below the item you selected.
9. Click [Delete] on the [Action] menu.
10. In the [Confirm Device Uninstall] dialog box, click [OK] to close the device manager.
11. Disconnect the USB cable that is connected to the printer, and then restart Windows.
12. Uninstall the driver. Carry out the steps from step 3 in Page 50 “Uninstall the Driver Windows 8” to uninstall the driver.
13. Install the driver again according to the "Setup Guide" ("Installing and Setting Up the Software”) or procedure in page 45 "To Install Driver Separately."

Windows 7

1. If the [Found New Hardware] appears, click [Cancel] to close it.
2. Click the [Start] menu, then right-click [Computer]. Click [Properties].
3. Click [Device Manager]. The [User Account Control] appears, click [Continue]. The [Device Manager] appears.
4. At the [View] menu, click [Show hidden devices].
5. In the list, find [Other devices], then double-click it. When the model name you are using or [Unknown device] appears below the item you selected, click it to choose it.
6. Go to the [Action] menu, and click [Uninstall].
7. In "Confirm Device Uninstall" window, select [Delete the driver software for this device.], and then click [OK]. Close the [Device Manager].
8. Disconnect the USB cable from the computer, and then restart Windows.
9. Uninstall the driver. Carry out the steps from step 3 in page 50 “Uninstall the Driver Windows XP / Vista / 7 ” to uninstall the driver.
10. Install the driver again according to the "Setup Guide" ("Installing and Setting Up the Software”) or procedure in page 45 "To Install Driver Separately."

Windows Vista

1. If the [Found New Hardware] appears, click [Cancel] to close it.
2. Click the [Start] menu, then right-click [Computer]. Click [Properties].
3. Click [Device Manager]. The [User Account Control] appears, click [Continue]. The [Device Manager] appears.
4. At the [View] menu, click [Show hidden devices].
5. In the list, find [Printers] or [Other device], then double-click it. When the model name you are using or [Unknown device] appears below the item you selected, click it to choose it.
6. Go to the [Action] menu, and click [Uninstall].
7. In "Confirm Device Uninstall" window, select [Delete the driver software for this device.], and then click [OK]. Close the [Device Manager].
8. Disconnect the USB cable from the computer, and then restart Windows.
9. Uninstall the driver. Carry out the steps from step 3 in page 50 “Uninstall the Driver Windows XP / Vista / 7 ” to uninstall the driver.
10. Install the driver again according to the "Setup Guide" ("Installing and Setting Up the Software”) or procedure in page 45 "To Install Driver Separately."

Windows XP

1. If the [Found New Hardware Wizard] appears, click [Finish] to close it.
2. Click the [Start] menu, then right-click [My Computer]. Click [Properties].
3. Click the [Hardware] tab, then click [Device Manager]. The [Device Manager] appears.
4. At the [View] menu, click [Show hidden devices].
5. In the list, find [Printers] or [Other device], then double-click it. When the model name you are using or [Unknown device] appears below the item you selected, click it to choose it.
6. Go to the [Action] menu, and click [Uninstall].
7. In "Confirm Device Uninstall" window, crick [OK].
8. Close the [Device Manager] and click [OK].
9. Detach the USB cable from the computer, and then restart Windows.
10. Uninstall the driver. Carry out the steps from step 3 in page 50 “Uninstall the Driver Windows XP / Vista / 7 ” to uninstall the driver.
11. Install the driver again according to the "Setup Guide" ("Installing and Setting Up the Software”) or procedure in page 45 "To Install Driver Separately."

Uninstalling the Driver

When uninstalling the driver, perform following operation.

Windows 8

*If the driver is uninstalled without following the procedure given below, there is a possibility that it might not be able to be re-installed.

1. Turn the machine off, and disconnect the cable that is connecting the PC and the machine.
2. Start Windows.
3. Click [Desktop].
4. Move the mouse to the lower right corner to display Charm and click [Settings].
5. On the task bar, click [Control Panel], and then [Uninstall a program].
6. Select the machine's driver that you want to uninstall, and then click [Uninstall].
7. When a message prompting you to confirm that you want to uninstall the driver appears, click [Yes].
8. On the task bar, click [Start], and then [Desktop].
9. Start Windows Explorer to open the drive and folder where the driver is located. (* Notes)
10. Double-click the "SETUP64.EXE"(64-bit version) or "SETUP.EXE" (32-bit version).
11. When the [User Account Control] dialog box appears, click [Continue].The driver's installer starts.
12. Click [Uninstall]. Select the machine that you want to uninstall, and then click [Start].
13. If it is necessary to restart your computer, a window prompting you to restart it appears. Click [Yes].
14. After the computer is restarted, display the Control Panel and click [View devices and printers].
15. If the icon of the device you wish to remove is shown, right-click on the icon to click on [Remove device].

(*)
When you are using the CD-ROM, specify one of the following folders. (The CD drive is drive D in this example).
D:\Drivers\25D\WIN8X64 (64-bit version)
D:\Drivers\25D\WIN8X86 (32-bit version)

If you're not using the CD-ROM, go to the Roland DG Corp. website (http://www.rolanddg.com/), and download the driver for the machine you want to delete. Then, specify the folder where you extracted the downloaded file to.

Windows XP / Vista / 7

*If the driver is uninstalled without following the procedure given below, there is a possibility that it might not be able to be re-installed.

1. Before you start uninstallation of the driver, unplug the USB cables from your computer.
2. Log on to Windows as “Administrator.”
3. From the [Start] menu, click [Control Panel]. Click [Uninstall a program].

4. Click the driver for the machine to delete to select it, then Click [Uninstall].
5. A message prompting you to confirm deletion appears. Click [Yes].
6. From the [Start] menu, choose [All Programs], then [Accessories], then [Run], and then click [Browse].
7. Choose the name of the drive or folder where the driver is located. (*)
8. Select "SETUP64.EXE" (64-bit edition) or "SETUP.EXE" (32-bit edition) and click [Open], then click [OK].
9. The [User Account Control] appears, click [Allow].
10. The Setup program for the driver starts.
11. Click [Uninstall] to choose it. Select the machine to delete, then click [Start].
12. If it is necessary to restart your computer, a window prompting you to restart it appears. Click [Yes].
13. The uninstallation finishes after the computer restarts.

(*)
When using the CD-ROM, specify the folder as shown below (assuming your CD-ROM drive is the D drive).
<Windows XP>
D:\Drivers\25D\WINXPX64 (64 bit edition)
D:\Drivers\25D\WINXPX86 (32 bit edition)
<Windows Vista>
D:\Drivers\25D\WINVISTAX64 (64 bit edition)
D:\Drivers\25D\WINVISTAX86 (32 bit edition)
<Windows 7>
D:\Drivers\25D\WIN7X64 (64 bit edition)
D:\Drivers\25D\WIN7X86 (32 bit edition)

If you're not using the CD-ROM, go to the Roland DG Corp. website (http://www.rolanddg.com/) and download the driver for the machine you want to delete, then specify the folder where you want to expand the downloaded file.

Uninstalling the VPanel

When uninstalling VPanel, perform following operation.

Windows 8

1. Quit VPanel. (Right-click [VPanel icon] in the task tray and select "Exit".)
2. Move the mouse to the lower right corner to display Charm and click [Settings].
3. Click [Control Panel], and then [Uninstall a program].
4. Select [Roland VPanel for DWX-4] and click "Uninstall."
5. Uninstall VPanel by following the instructions given in the window.

Windows XP/ Vista / 7

1. Quit VPanel. (Right-click [VPanel icon] in the task tray and select "Exit".)
2. From the [Start] menu, click [Control Panel] -> [Programs and Functions] ([Add or Remove Programs] in Windows XP) from the [Start] menu.
3. Select [Roland VPanel for DWX-4] and click "Uninstall" (or "Delete").
4. Uninstall VPanel by following the instructions given in the window.

Responding to an Error Message

This section describes the error messages that may appear on VPanel window, and how to take action to remedy the problem. If the action described here does not correct the problem, or if an error message not described here appears, contact your authorized Roland DG Corp. dealer.

1000-???? % limit switch is not found.
(% is any of "X", "Y", "Z", or "A".)

The limit switch of the displayed axis cannot be detected. Turn off the power, remove the objects which block the operation of the machine and accumulated cutting waste, if any, and then restart the machine.

1006-???? % motor position is lost.
(% is any of "X", "Y", "Z", or "A".)

The cutting conditions may be excessively strict. Review the settings of CAM and the shape specified in the cutting data. Cutting waste may hinder the operation of the machine. Clean the machine.

101D-0000 The tool has not been released.

Release the tool forcibly by following the message of VPanel. After the tool was removed, clean the inside of the collet and the magazine. If the same error recurs even after the inside of the collet was cleaned, the collet may be deformed. In this case, replace the collet.

101E-0000 The tool might be broken.
101F-0000 The tool chucking has slipped out.

The tool moved out of position or was damaged due to a large load on the tool. The cutting conditions may be excessively strict. Review the settings of CAM and the shape specified in the cutting data. If the same message appears even after the cutting data was reviewed, the tool may be worn. Replace it with a new one.

1017-0000 Cover opened during operation.

The machine will come to an emergency stop if the front cover is opened when the spindle is rotating. Turn off the power, and close the front cover, and then restart the operation from the beginning.

1020-0000 The tool is too long.
1021-0000 The tool is too short.

Replace the tool with one of proper length (length: 40 to 55 mm). There is a possibility that the position of the tool holder is not correct. Check the position of the tool holder.

☞ P. 22, "STEP2 : Attaching a Tool"

1022-0000 The tool is not found.

The tool is not set, or it is mounted on a wrong stocker number. Set the tool again.
There is a possibility that the ATC magazine may be out of position. Perform automatic correction. If the same message appears even after automatic correction was performed, the ATC magazine or tool may be contaminated. Clean the machine.

1023-0000 The number of parameters for a RML-1 command received from the computer was incorrect.
1024-0000 The parameter for a RML-1 command received from the computer was out of range.
1025-0000 The RML-1 command from the computer could not be interpreted.
1026-0000 NC code error occurred. Address is not defined.
1027-0000 NC code error occurred. Parameter is not defined.
1028-0000 NC code error occurred. Can not be executed.

There was something wrong with the cutting data received from the computer. Review the cutting data.

1029-0000 The spindle experienced an overload.
102A-0000 The spindle experienced overcurrent.
102D-0000 Spindle rotation is impossible because the spindle shaft is locked or voltage is too low.

The spindle stopped under a large cutting load. Turn off the power. The cutting conditions may be excessively strict. Review the settings of CAM and the cutting data.

102B-0000 The spindle motor temperature is high.

The spindle motor stopped due to a continued high motor load or instantaneously excessive motor load. Turn off the power. The cutting conditions may be excessively strict. Review the settings of CAM and the shape specified in the cutting data. In addition, the motor may be overheated. Keep the spindle motor rested for a while, and restart it.

1030-0000 The dust collector is not working.

The dust collector is turned off or powerless. Turn on the dust collector, or check the settings of the dust collector and the filter.

DOC-1138

R2-130903